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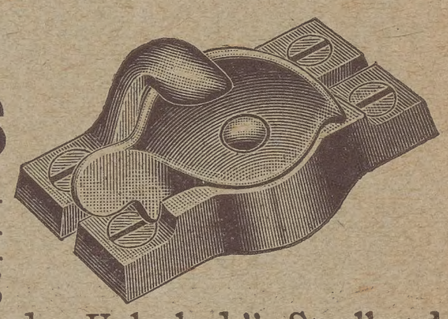

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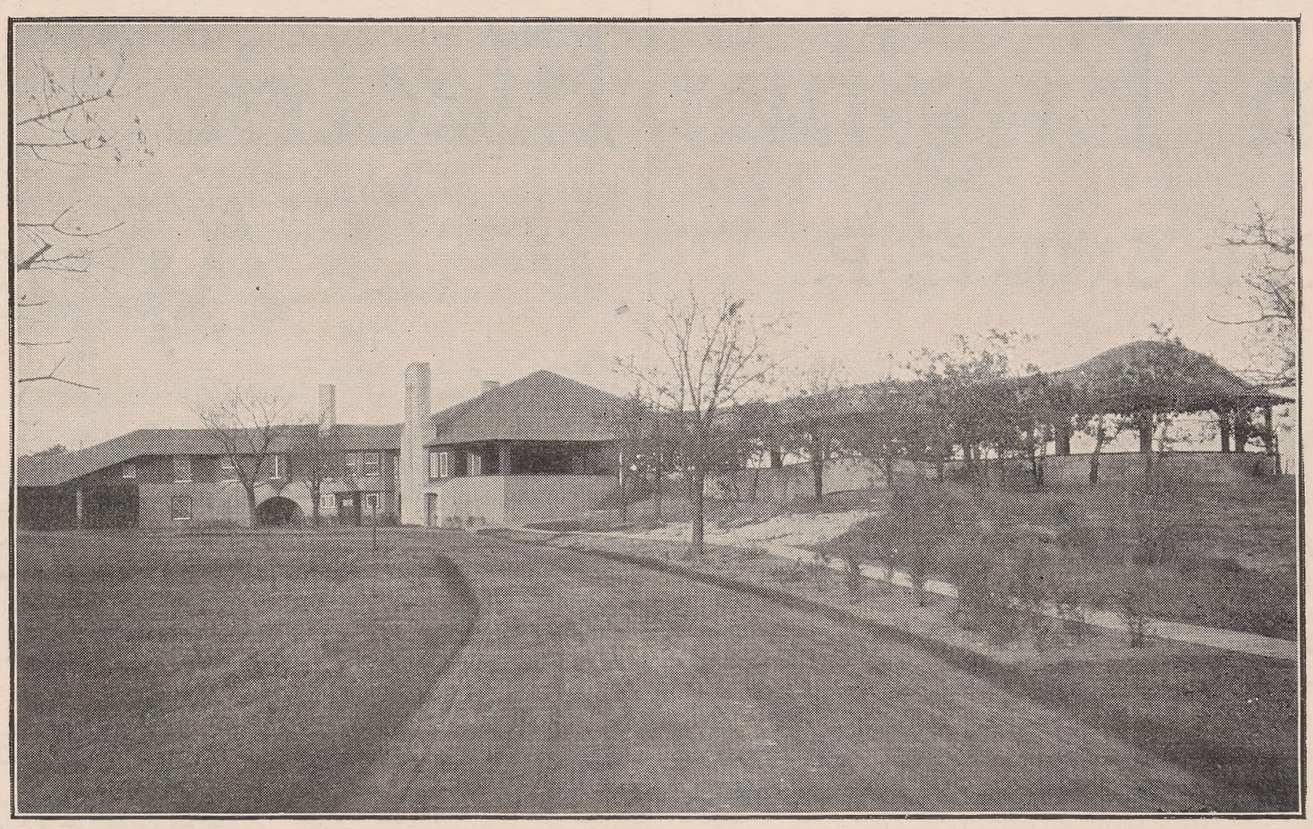

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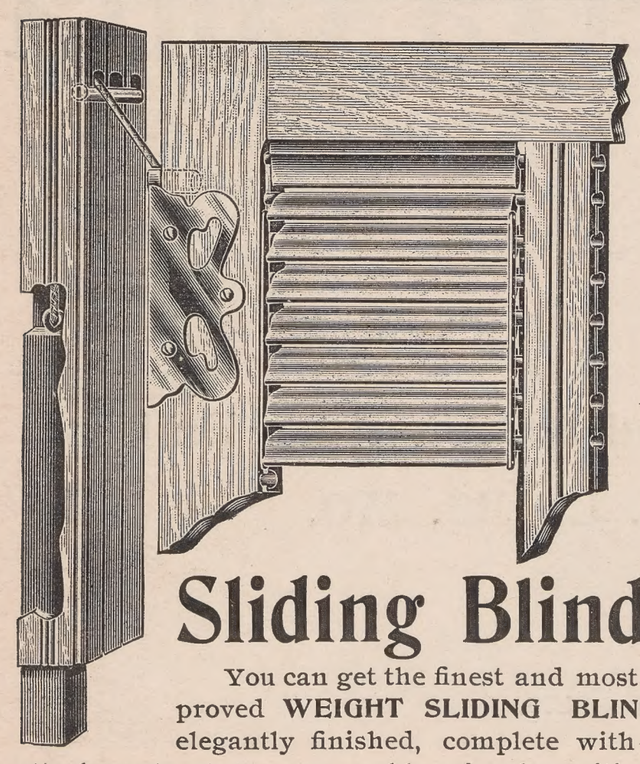

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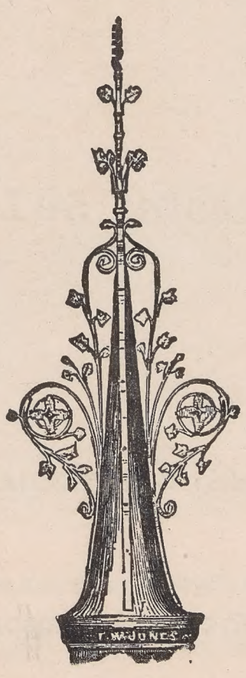

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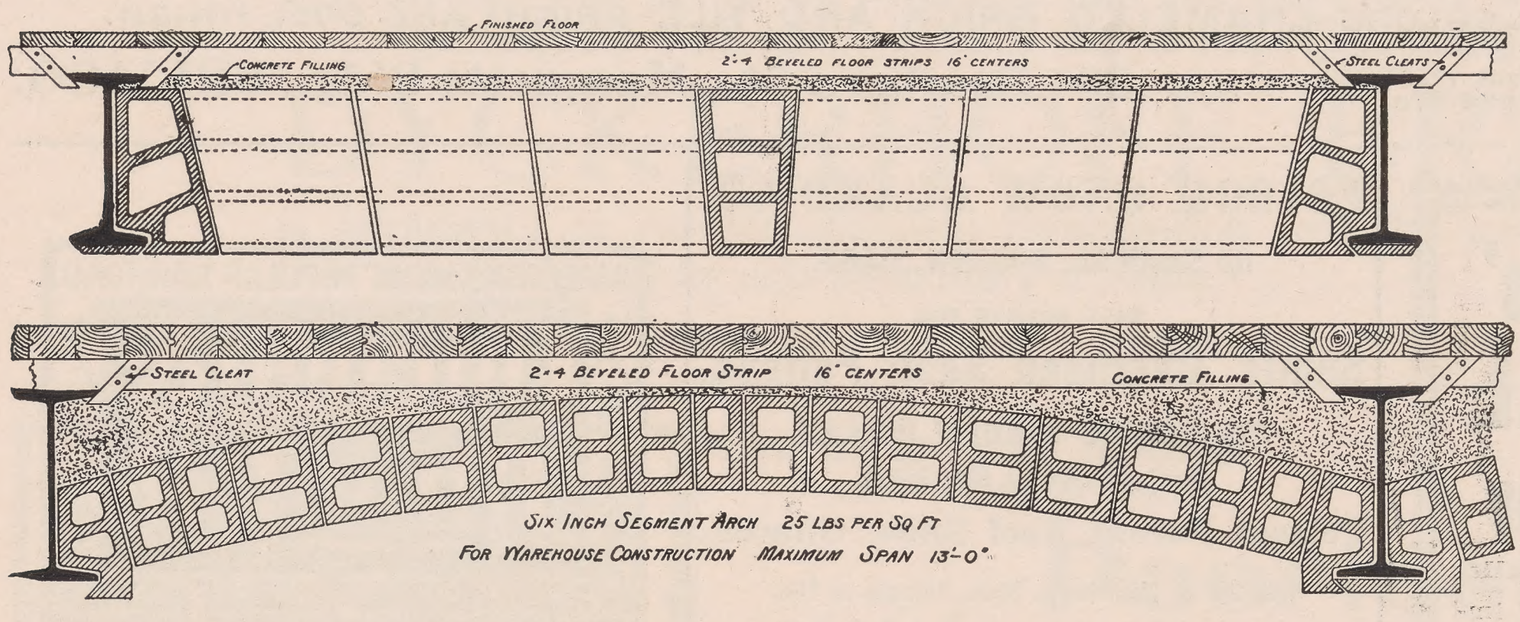
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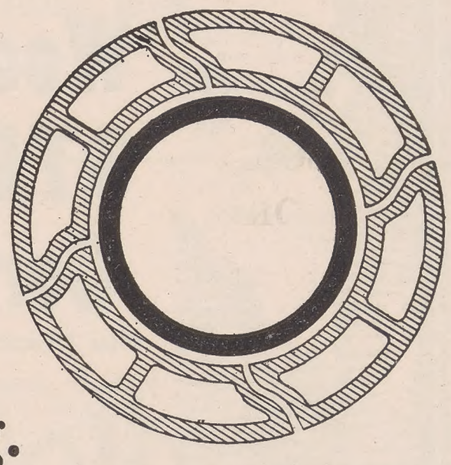

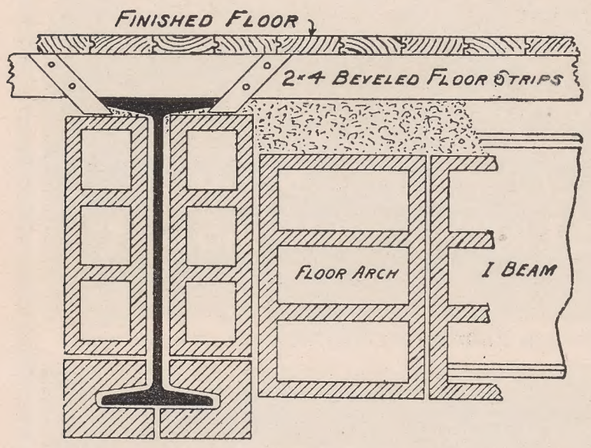

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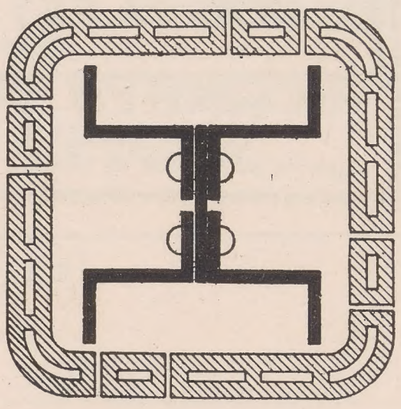

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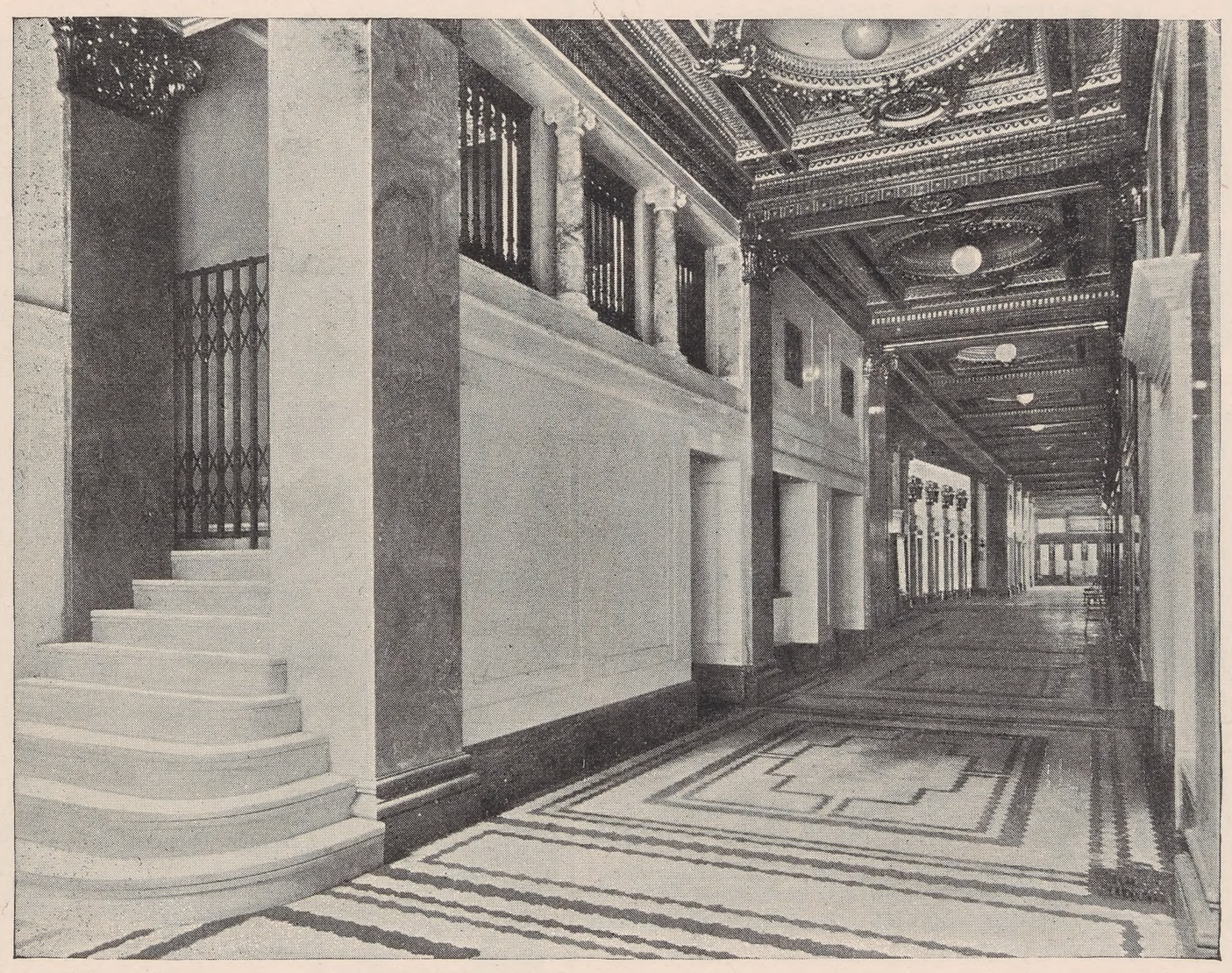

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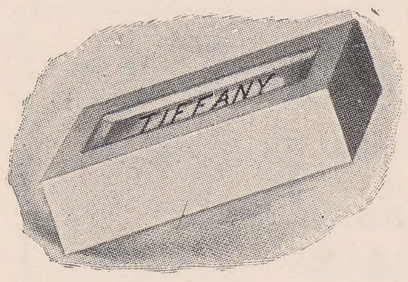

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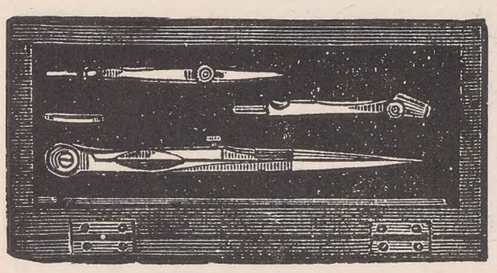

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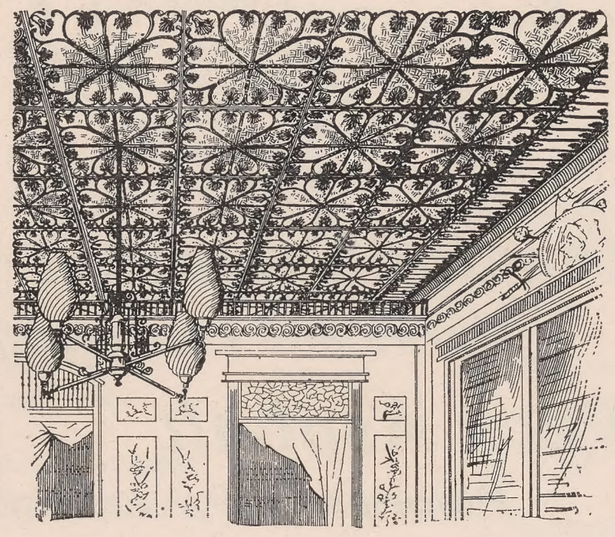

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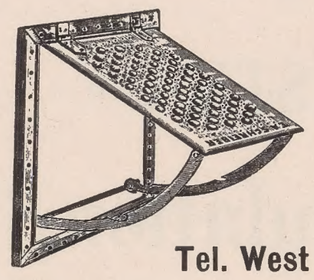

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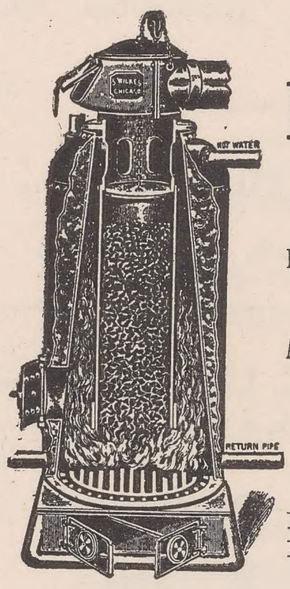

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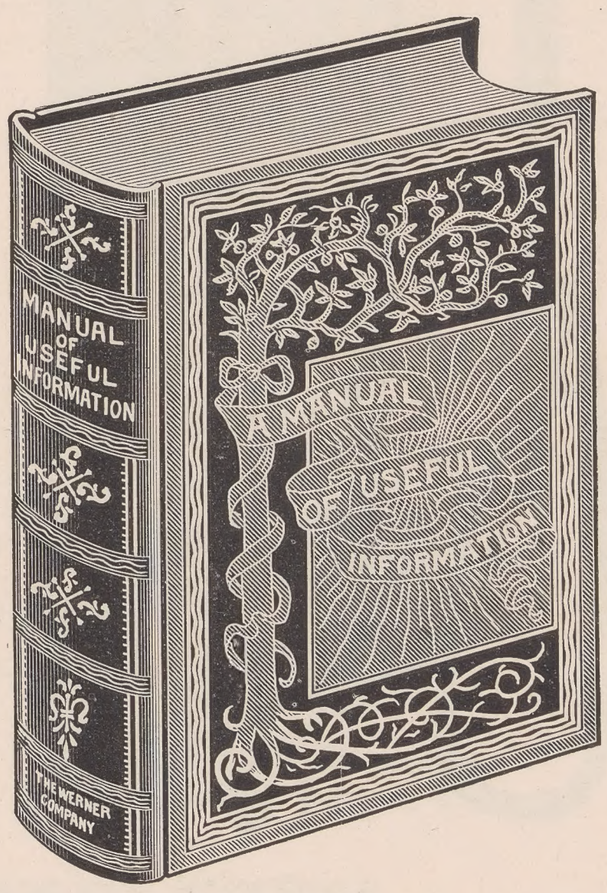

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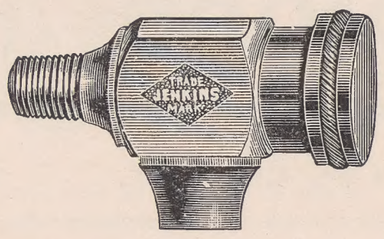

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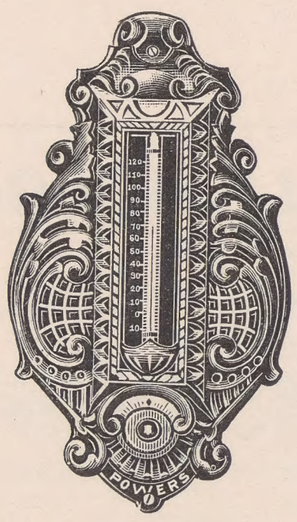

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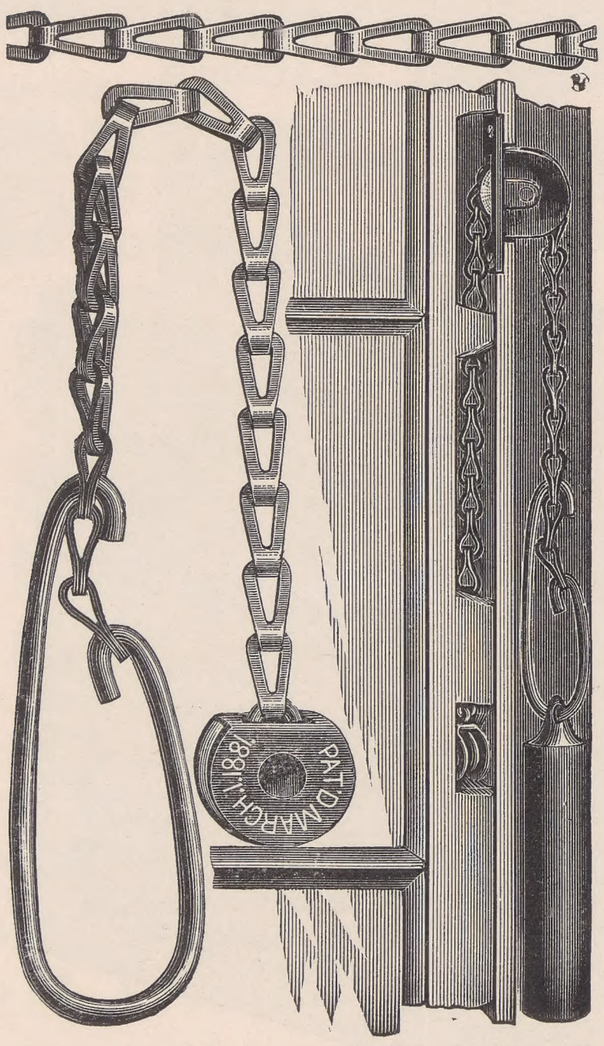

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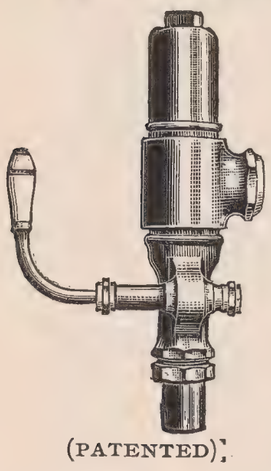

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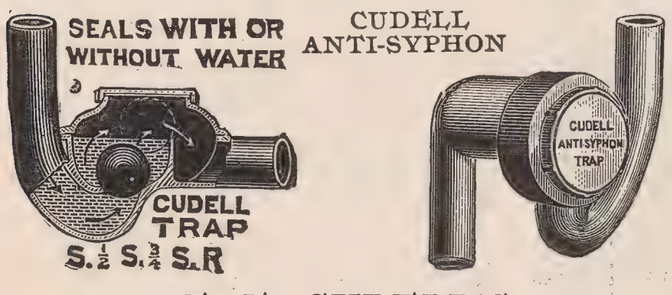

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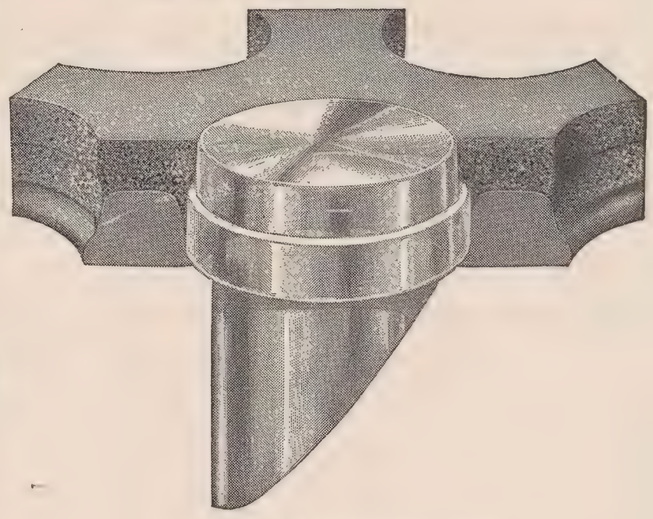

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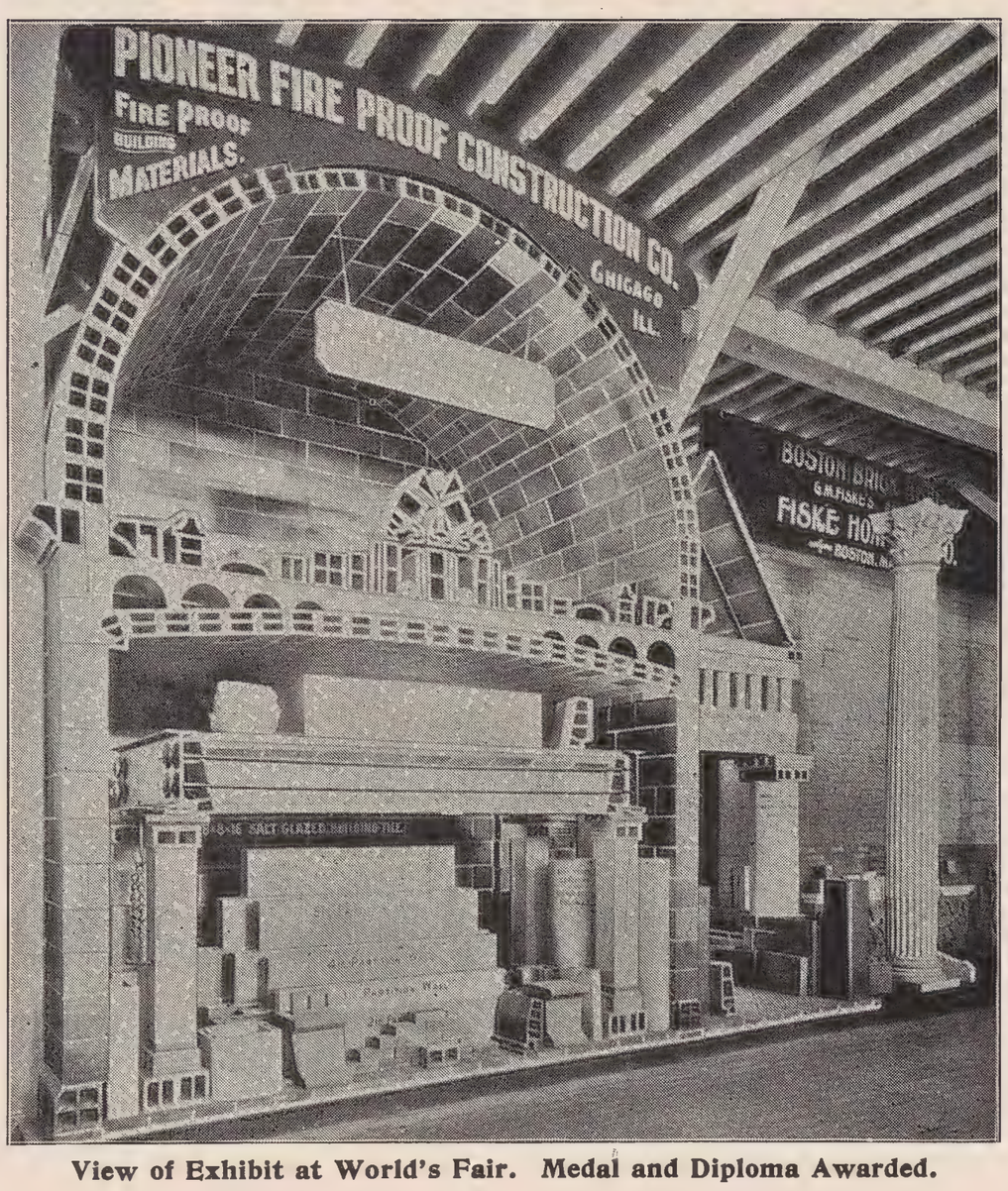

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which marks real advance, without some insight into the history of sewage purification.

Beginning quite fifty years ago with the appointment by Parliament of the Commission on the Pollution of Rivers, the effort has been continuous to secure some method by which the putrescible organic matter, offensive to sight and smell and dangerous to public health, may be economically removed from sewage before discharge into rivers or harbors.

The original attempts at improvement were by what is now known as continuous mechanical filtration, a mere straining of the sewage, turning into the rivers an effluent water, clear but containing all the putrescible organic matter which was originally in solution, a process which merely deferred for a day or two the inevitable putrefaction and consequent offensive condition of the stream.

This was followed immediately by methods of chemical precipitation, with a commercial intention of producing a precipitate or sludge valuable as manure. The sludge was obtained, but could rarely be sold, and the effluent water was but forty to sixty per cent purer than the original sewage. Lime was the original precipitant, but the process was improved by the use of crude salts of alumina, and the principle of occlusion was introduced, and it has been claimed that as high a degree of purification as eighty-three per cent was obtained, but this was not found an everyday, practicable result. Better precipitants have been used, among the latest, compounds of manganese, and chemical precipitation continues in use. The sludge from these works has, however, generally proved a burden.

Irrigation, sometimes called broad irrigation, followed, in which the sewage was used in the cultivation of crops by flooding the fields. A good effluent water was obtained by this method, but the commercial idea obtruded itself, as it was found that an excess of sewage increased the crop, and the effluent deteriorated. The large area of land required also confined the use of this method to small towns as a rule.

Intermittent filtration developed through experiments in irrigation, and is the process which in one form or another seems to offer the solution so long sought. It consists in the application on alternate days to adjacent plots of porous land properly underdrained of regulated amounts of sewage. Investigation has shown that the result of this is the cultivation of a colony of bacteria of a class present in all domestic sewage, whose food is the organic matter contained in sewage, that the day of rest is essential to the aëration of soil necessary to sustain the life of the bacteria, and that the process is complete under careful management, the organic matter being destroyed, and the effluent attaining a purity of more than ninety-seven per cent. In practice small areas of land are used, and a high degree of purity in the effluent may be obtained.

This process is also used to purify the effluent obtained by chemical precipitation where economy of space is desired, but in this case care must be taken that the chemicals used in precipitation are not injurious to bacterial growth.

The desire to economize in space or to quicken action has resulted in the design of what is called a bacteria or contact tank. This is a tank of sufficient size, one of a series, filled with coarse material, such as coarse gravel, coke-breeze or the like, which is filled with sewage, and allowed to stand a sufficient time for the bacteria, which have been bred therein as above by use, to attack and destroy the organic matter of the sewage. The water is then drawn off, and discharged as effluent in a greater or less degree of purity into the stream. The tank is then allowed sufficient time for aëration before refilling.

With the same intent to accomplish a great deal of work in a small space, and to avoid the clogging of the surface of the filter-bed with the fine suspended matter of raw sewage, a system has been designed involving the use of a primary tank to receive the sewage. This tank is called a septic tank. From it light and air are excluded, and the sewage is first discharged into it, and there submitted for a time to the action of another family of bacteria, also present in all sewage, by which it is decomposed — that is, broken up into simpler elements, and brought into the form of a solution — after which it is discharged upon the filter beds as in intermittent filtration, or into contact tanks as above. The bacteria which work in the tank from which light and air are excluded are called anaërobic, and those in the filter aërobic bacteria.

In the contact tank and in the septic tank processes the degree of purification attained in the effluent seems to be irregular and not very high; it is given at from sixty to ninety per cent. It seems probable that with the variations in quantities and character which exist with sewage at different periods of the day, a system so directly subject to the will of the operator would be likely to vary materially in the degree of purification attained.

The use of the septic tank as a primary process seems to be entirely satisfactory, but as the filter-beds used with it are of very coarse material, resembling contact tanks, the undoubted cause of incomplete purification is haste in the secondary process, and if the septic tank were used with porous earth for the filter-bed, as provided in ordinary intermittent filtration, it is likely that with some economy in time and area a very high degree of purification might be obtained.

In practice the use of the septic tank is not new, being merely the adaptation to a large scale of the device of the Rev. Mr. Moule, substituting for the absorption tile a filter-bed. Mr. Moule's device has been used with great satisfaction for many years in the final disposal of the sewage from isolated houses, and though his siphon tank has never been dignified as a "septic" tank, it was that in fact, and for many years we "talked prose without knowing it."

The author's short discussion of the evolution of hydraulic formulæ, chiefly as applied to the flow of water in pipes and conduits, is historically interesting and leads up to the formula of Ganguillet and Kutter, which, with its carefully established factor for the effect of different surfaces upon the flow of water in contact, is generally accepted as most trustworthy.

In this connection the author has modified the formula so that it may be used in connection with elaborate tables of factors and compound factors, which are given in the book, with much saving of labor. There is also given a graphical method of determination of the values of the variable coefficient of the formula, which is useful, together with a diagram determined by this method for the different values of the variable factors.

Other valuable tables are the general table for channels with segmental cross sections, and similar tables for specific sizes of pipes, and also those giving values of factors to be used in Darcy and Bazin's formula.

The methods of design and construction of sewerage works described by the author are practically the same as those given in Mr. Latham's work, and are of course English throughout. While in a general way these agree with American practice, they are governed to some extent by climatic differences, and are also much more complicated in the devices used. Many of these devices will probably never be accepted by American engineers, who we think are rather more inclined to simplicity in construction than are their English brethren.

The consideration of the rate of run-off of storm water as a factor in the determination of the proper size for sewers is treated very superficially by the author, and the seeker after information in this matter can get but little assistance from him. Beyond the remark that the nature of the surface considered and its inclination are factors, and further that a rainfall of an inch an hour seldom occurs in England and that "an allowance of that amount to be carried off in an hour should be ample," there is nothing material said, except that "the Metropolitan sewers were constructed to convey a rainfall of 0.01 inch per hour."

Reference to Baldwin Latham's work would have afforded the information that experience has shown that this small rate of run-off, 0.01 each per hour, is too small an amount in many instances, even with the rainfall, moderate both in quantity and intensity, which occurs in England. Latham's discussion of this question is a much better guide in the formation of sound judgment than anything offered by our author.

The attempts to deduce a formula which may be used to determine the rate of run-off under the different conditions which must be considered has not yet been wholly successful, but enough has been done to materially aid the judgment under most conditions. Several formulæ have been given in which the conditions which affect the rate of run-off are taken to be the maximum rate of rainfall, the area drained, the character of the surface and the average slope of the area. In these formulæ the factor representing the character of the surface is a coefficient determined for paved and built-up areas, for areas partially built up and for rural areas. It is evident that this coefficient may be determined for these conditions and for variations in soil with sufficient exactness so that while the element of individual judgment may be largely eliminated in fixing the size of sewers, they may be economically adapted to their work. A factor which is not considered in deducing these formulæ is the duration of the maximum rainfall, and this factor may be of considerable importance. Doubtless it can and will be introduced as these formulæ are gradually molded into one.

The section of the book devoted to apparatus gives a design for public toilet-rooms to be located below the street surface, provided with water-closets, urinals and wash-basins. This is a recognized want in American cities, and together with public baths, will probably be bestowed upon the people by municipal authorities.

In this connection it may be noted that a design is also given for temporary earth closets and sheds for use in military camps. This design is to be commended to the consideration of our War Department, as there can be no doubt that the use of such a simple expedient would have been valuable in the preservation of health in the home camps in the late war. Similar apparatus was used with success during the construction of the works for the World's Columbian Exposition.

The work before us concludes with a description of methods of disposal for city garbage or house refuse, and for sewage sludge. The apparatus described is principally destructors, or, as they are called in this country, cremators. The only instance of an attempt at the direct utilization of house refuse given is by means of mechanical separation of the components. This separation is accomplished by means of rotating screens of different mesh, the coarser separated materials of value being afterward hand-sorted for sale and the finer material being ground and mixed with the dust for use as manure. The method has not been financially successful and has been abandoned.

The direction of English thought in this matter seems to be wholly toward the use of the waste products of combustion in destructors for steam making, and the economical disposal of garbage is accomplished by supplementing the destructor with an electric lighting plant in many instances. The system, which is known among us as the reduction process, and which probably contains the solution of the problem for large cities, does not seem to have been tried in England. This may be due to difference in

the character of house refuse or to the fact that many English towns have also to dispose of sewage sludge.

One of the most interesting instances of complete disposal of sewage and house refuse at a city plant is that of Southampton, England. A very good description of these works is given in this volume, and it is a good example of what may be accomplished by an engineer, using existing processes, by an intelligent and well-directed application. Owing to entirely different values for waste products which obtain in different places it is not to be deduced from this instance that equally good financial results are to be obtained even in many cities, but it is undoubtedly true that in a purely sanitary view such result may be obtained in all cities which will pay for it, and under good management the cost need not be excessive.

We regret again that so much good material is presented, as in this book, in so crude a shape, and we hope that it may be revised and in another edition made more useful.

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THERE is no economy in selecting a paint simply because it is cheap, nor is it economical to save in the number of coats applied at the expense of durability.

Taken all in all, pure white lead is about the most expensive paint that can be applied to a building; but even so, it is, in the long run, cheaper than some of the very cheap ready mixed paints, concocted with alkali, water and benzine. The house owner that has his building painted with pure lead is reasonably sure to have lusterless, discolored surfaces to reflect upon within a few months after the work is completed, and is fairly certain to need the services of the painter again within three years; but good work can be done on a chalky lead surface. Over an emulsion paint, poor in oil, however, a good job can never be done, for such a paint will scale and crack most erratically.

The secret of good painting is to use plenty of pure linseed oil, to apply several thin coats rather than two heavy ones, and to use pigments that do not themselves destroy the oil. This last requirement would exclude white lead entirely, and there is no doubt that remarkably permanent work can be done without using a pound of lead. But white lead has remarkable obscuring powers, and in painting, as in everything else, compromises are often advisable. The "body" of white lead can be utilized without sacrificing all the other desiderata of good painting by using it in combination with zinc and inert materials in the relative proportions recommended by the Pennsylvania Railroad chemists — equal volumes of the first two with the addition of as much barytes or gypsum as the paint will stand without impairing its opacity.

The most economical paint is the one that in a given number of years affords the greatest measure of protection at the least cost for materials and labor. Observation will prove that the combination of paints are superior to "straight" paints in this respect.

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Competition for Saint Louis Trust Company building. Accepted design by Shepley, Rutan & Coolidge and John Laurence Mauran, architects; design submitted by Eames & Young, architects; design submitted by Theo. C. Link, architect.

Chicago Institute, Chicago, James Gamble Rogers, architect. The building is to accommodate three general departments; the Academic School, the Pedagogic School and the Summer School. It will contain a library, a gymnasium, a natatorium, manual training rooms, an assembly hall, music rooms, lecture rooms and class rooms; also laboratories.

George M. Pullman Memorial, erected in Graceland Cemetery, Chicago, S. S. Beman, architect. The design is a Grecian Corinthian column set in the center of an elevated esplanade of graceful form, rising three steps above the lawn level. At each side to the right and left of the column are circular granite seats. The extreme length of the esplanade is fifty feet and its width is twenty-four feet. The extreme height of the column from grade is forty feet. The shaft is a monolith two and one-half feet in diameter and twenty-seven feet long, exclusive of base and capital. The weight of the column alone is 50,000 pounds. The memorial is located in the center of the lot, which is 138 by 85 feet, and fronts in two avenues with a sweeping curve. The construction is of enduring and substantial character. The entire monument is built of white monumental granite.

The Jane Club, Chicago, Pond & Pond, architects. The "Jane Club" is a working-girl's coöperative club, the grounds and building for which were donated by a philanthropically minded woman and turned over to Hull House, which is the recipient of the income the property produces. The building is substantial in its construction, with heavy plaster-deadened floors and solid plaster partitions. The heating and lighting is done from the Hull House plant. Views in the social room, library and dining rooms are shown, as also is the exterior. The bedrooms are for the most part single rooms, each with sufficient closet space. The general bath and toilet facilities are ample. The trim generally is Flemish oak in the main rooms and white wood stained in various colors in the bedrooms, each room having a consistent and harmonious color scheme.

Photogravure Plate: Residence of J. E. Nolan, Evanston, Illinois. Myron Hunt, architect, Chicago.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Residence for J. E. Nolan, Evanston, Illinois. Myron Hunt, architect, Chicago. An exterior view and view in living-room are shown.

Residence of Chancellor L. Jenks, Jr., Evanston, Illinois, Myron Hunt, architect, Chicago. An exterior view and view in living-room are shown.

The following photogravure plates are among the views selected by the Jury for the American Architectural Exhibit at the Paris Exposition: House of John Sims, at Laverock, Pennsylvania, Cope & Stewardson, architects; Interior of Chapel of St. Paul's School, Concord, New Hampshire, Henry Vaughan, architect; Church at New Haven, Henry Vaughan, architect; House and Studio of H. P. Schladermundt, Bromville, New York, Walker & Morris, architects.

ASSOCIATION NOTES.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Every student before graduating from the Massachusetts Institute of Technology has to perform a satisfactory thesis. Time is allowed for this work in the second term of the fourth year. These theses afford students an excellent opportunity to perform original research work.

In the course of electrical engineering, a Japanese student has chosen for his subject a study of the size of wire necessary when aluminum is used for a conductor of electricity. He is to study the relative capacity of aluminum as compared with that of copper. As the price of copper has risen so much, and as the price of aluminum has fallen, the use of the latter metal has already begun to compete with that of copper in electrical manufacture. Insurance people have appointed a committee to follow the results of such tests, and to make tables from them, as it is most important to know, when buildings are wired, the safe limit of the amount of current which any wire covered or uncovered may be made to carry.

If the results of this thesis are satisfactory, they may form the foundation of such a table.

The method chosen for determining the relative capacity of the aluminum is entirely original, and is a method in which the temperature of the wire will be measured directly while it is carrying different amounts of electricity. Formerly this was studied by other qualities, and because the resistance of a sample wire changed, for instance, it was inferred that the temperature at that time had risen or fallen a corresponding amount.

The electrical laboratories afford ample opportunities for furnishing such quantities of electricity as are passed through commercial wiring, except in the cases of large central power stations.

WASHINGTON ARCHITECTURAL CLUB.

The Washington Architectural Club's program for its regular meeting of February 3 consisted of a visit to the "Halls of the Ancients."

An address was made by the Curator, Franklin W. Smith, Esq., who is putting unflagging enthusiasm into the great undertaking of establishing "National Galleries of History and Art."

The added interest in, and better appreciation of, architecture which would be awakened in the public mind by such an institution as Mr. Smith contemplates, and of which the present "Halls of the Ancients" is but a forerunner, leads him to seek the support of the architectural fraternity. After the meeting, the club adjourned to an informal dinner.

CHICAGO ARCHITECTURAL CLUB.

The thirteenth annual exhibition will be held at the Art Institute, commencing March 20 and closing April 2.

CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS.

The first salon of photographic pictures of the Chicago Society of Amateur Photographers will be held in the Art Institute, April 3 to April 18. The exhibition will be based entirely upon artistic lines, and will be judged by a competent jury of artists, composed of Mr. Alfred Stieglitz, of New York; Mr. Joseph Keiley, of Brooklyn; Mr. Clarence H. White, of Newark, Ohio; Miss Eva Lawrence Watson, of Philadelphia, and Mr. Ralph Clarkson, of Chicago. The local committee representing the society is F. K. Lawrence, Robert Craik McLean, Marshall Wait, W. F. James, E. L. Bourke and W. B. Dyer. As this will be the first exhibition of purely photographic art ever held in Chicago, it will be interesting not only to artists, but to all those interested in the results attained in the direction of producing artistic effects with the camera.

ST. LOUIS ARCHITECTURAL CLUB.

The annual exhibition of the St. Louis Architectural Club will be held at the St. Louis Museum of Fine Arts, April 7 to 22. Frank A. P. Burford is the secretary.

THE INLAND ARCHITECT AND NEWS RECORD

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Movement to Permanently Beautify the National Capital.

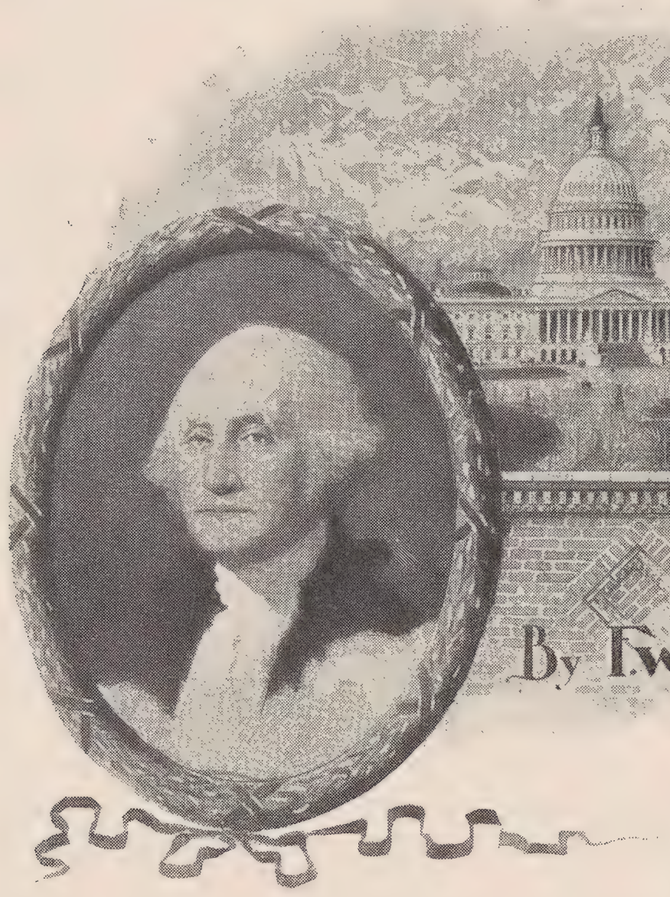
In reviewing Mr. Fitzpatrick's elaborate article in this issue the dominant thought seems to be how unnecessary such an earnest plea for the improvement of our national capital must seem to a citizen of any of the capitals of Europe. Because all that is set forth so elaborately, reasonably and aptly from the American standpoint is a matter of course to the governments of Europe. There the advisability needs no plea, as it is a recognized fact, and the only question is how it may be best accomplished. The demand for the harmonious grouping of buildings with the attendant open spaces which can be naturally beautified is, however, becoming recognized throughout the cities of the United States, and, in spite of the commercialism that holds back in every direction, will soon gather sufficient force to control in a great degree the future development of our cities. It is not alone that the individual is becoming better educated in the necessity of harmonious surroundings and fresh air, and also impressed with its direct commercial value, but individuals and societies in every city have taken the matter in hand and are using all their influence in that direction. The pilgrimage of C. Howard Walker in his investigation of European methods, the work of the T-Square Club of Philadelphia, and other societies of cities from New York to San Francisco, all these voicing and putting into concrete form the wishes of the people, must have its ultimate effect, especially when the idea is as old as Athens, and benefits can today be observed both from a commercial and a hygienic or artistic standpoint in every European capital of note. It is most fitting that the work should find its strongest advocates and its most perfect example at Washington.

Foreign Customs Duties on Architect's Plans.

We consider it well to call the attention of architects who wish to compete for buildings in Canada to one of the many peculiarities in the administration of the customs of that country. In answer to an advertised public invitation to send school plans to the Educational Department of Ontario, Canada, an architect in the United States wrote to the Minister of Education at Toronto, Canada, requesting information, and also if the invitation extended to architects living in the United States. In response he received a letter from the Deputy Minister of Education saying, "that the Department will be pleased to have architects of the United States among the competitors." Plans were sent in due time by express, and nothing further was heard until some time after, when the architect who sent the plans learned from the express company that the plans remained in bond at Toronto, on account of nonpayment of duty. The architect wrote to the Minister of Education and received answer that—

> The matter of duty is something that this Department has no control over. The Customs authorities have refused to permit the drawings to be delivered to the Department without the payment of twenty per cent duty on the value thereof. No refund will be made on the duty that may be paid, whether the plans be returned or retained.

There was doubtless no intention to withhold information, but it would have been well to have stated in the invitation to competitors in foreign countries that the payment of a duty would be a prerequisite.



Beautifying the Nation's Capital.

By F. W. Fitzpatrick

MANY of our cities are beautifully located, and their natural charms have been enhanced by man's skill. Other cities there are that are not so beautiful, and we must own up that there are still others, important ones, too, that make us wonder how under heaven they could possibly be uglier, and whose architects and engineers and builders seem to have vied with each other, in unholy competition, to see how much artificial ugliness they could add to the natural deformities. Even in the least-favored cities, however, there has been of late years a more or less well-defined movement to smooth out some of the wrinkles, and otherwise cover over the offenses of nature and of man against municipal beauty. The study of municipal improvements, generally, is most interesting, and to glance over what has been done in that direction in some of our cities would be a most fascinating task, and one that we may not be able to resist taking up in another paper; but, for the nonce, we will spend a little while with the problems that confront the nation in its handling of its one and only city, our capital, Washington — a city in which each of our seventy-five millions of citizens should feel a pride and a proprietary interest, and whether he lives in Maine or California, in Florida or Alaska. Apart from the patriotic feelings each one should have, there must needs be some purely personal, almost selfish ones, about this subject, for, provided the citizen be of masculine persuasion and of fairly sound mind, there is no knowing just how soon he may have to live here, in Washington, representing his own and his fellow-citizens' interests and running those fellow-citizens' errands; and provided, further, that he had the good judgment to be born in this country, he is never quite sure but that in a moment of forgetfulness he may permit himself to be hustled by his friends into the exceedingly cramped private quarters of the White House itself. For this, if no other reason, should he seek to improve his possible future surroundings, and that he derive some slight assistance from this paper, a directing of attention to what is needed, what he should clamor for, is the earnest prayer of the writer thereof.

I often wonder, if the rather flat condition of the nation's purse at that time, the struggles and the general smallness of everything then, permitted Washington, when he selected the site and l'Enfant when he laid out this city, to even imperfectly realize how well they had planned, and that in a hundred years the nation would have grown so in wealth and in power that, with little effort, their original scheme could be made the most beautiful city on earth — bar none!

Nestling down amid surrounding hills that form three-quarters of a vast amphitheater with the river front as its proscenium, it *is* beautiful indeed. Its splendidly paved and wide streets bisected by even more splendid avenues, its magnificent capitol — than which no more imposing nor grander building, ancient or modern, was ever built — the stately old Treasury and Patent Office, the noble White House, with its architectural and historical memories of almost Colonial days, the perhaps rather florid but nevertheless handsome library, the grand stretch of the "Mall," the fine trees everywhere, and the frequent breathing spots of parks, squares, circles and triangles of green at the intersections of the avenues, all about it, aye, even its sins — of which more anon — make us love it.

And those who have ever lived here, be they presidents and statesmen from Ohio, diplomats from la belle France or from the sunny Orient, or mere officeholders from the wilds of Minnesota, will agree with me that once having tasted the delights, the charms, natural and artificial, of this blessed city, they are loth indeed to ever call their own again, or any other, than this, their home.

For a time, and since then at times, the evident original intent of the city's founders was carried out, the group formed by the Treasury, White House, and the State, War and Navy building, is symmetrical, balancing well with the other break in Pennsylvania avenue, the capitol; the Department of Agriculture, the Smithsonian and other museums align fairly well to the south of the "Mall," and the group on Judiciary square is well intended; but then, at other times, the Government has gone off at a tangent, and slapped a building down here and another there, the Lord only knowing the why and the wherefore, so that today there is neither a system nor even the semblance of a defined plan or general scheme.

And the sins of Government Architecture are in keeping with its eccentricities of location. The State, War and Navy building is a cross between an Indian pagoda and a seaside cottage done

THE WHITE HOUSE.

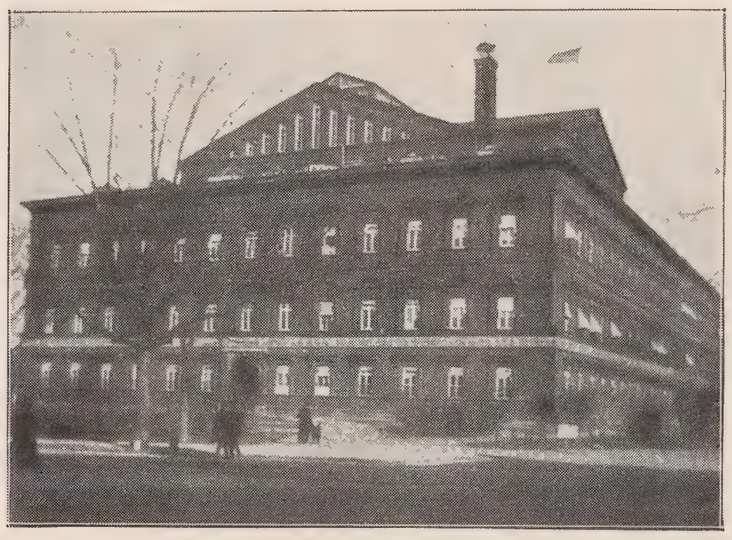
in splendidly wrought granite; but then it is so big, so clean, and the work so well done that it satisfies the uninitiated. The red packing box, with its yellow hoop of terra-cotta soldiers, mules and guns, otherwise known as the Pension Office, can be called nothing short of superlatively vile. The one consolation is that it was not "designed" by an architect, but even that is scant solace, for we must regret, with that doughty old warrior, Sheridan, that it *is* fireproof and liable to be with us a long, long time. The recently completed City Postoffice is pretentious, a feeble attempt at duplicating Richardson's splendid Pittsburg Courthouse, unfitted for its purpose or for its location, uncouth, and merits to be classed with the private architecture of the city.

This latter, with rare exceptions, is bad, worse than bad. Lots of money has been spent in building, the best of materials used and unexcelled sites filled up, but for some unknown reason the results have been *queer*, to use a mild term. The Raleigh Hotel, the *Star* and the *Post* newspaper buildings, the Washington Loan and Trust, and perhaps three or four other important private structures only are worthy of any attention, while the other buildings, hotels and big apartment houses are generally miserable specimens of architecture, notably the Cairo, which, to put it gently, is a monstrosity. The railway stations, the churches, the business blocks and the costly dwellings, barring, perhaps, a dozen or so, are hardly fit to grace a town of 25,000, much less a city of 300,000 people, the capital of a great nation.

PRIVATE ARCHITECTURE—A CHURCH AND THE PENNSYLVANIA RAILWAY STATION.

The manipulations of the real estate men, together with the mutations of time, have also played havoc with those original and well-devised plans of the fathers. Pennsylvania avenue, that was intended as the grand artery of the city, a street of noble proportions and magnificent possibilities, is lined with grog-shops, cheap shooting-galleries and shoddy stores the greater part of its length; the remainder of it is much the same, but with an oasis here and there in the shape of a good building or an ugly but high-class store. The very best business houses seem to have drifted off it to F street, between the Treasury and the Patent Office (this stretch has also become the fashionable down-town parade for the fine dames and damsels and the seraphic-single-barreled-eye-glass dandies).

Yet, property on Pennsylvania, "the Avenue," is held at New York prices, particularly when the Government wishes to buy



PATENT OFFICE.

some. The space intervening between that avenue and the "Mall," or Park, instead of being filled with Government buildings, business blocks and offices, is given up almost wholly to slumdom. There are respectable patches, of course, but we are justified in calling it the bowery of Washington, and the mall itself is not frequented by a class that by any stretch of courtesy could be called *la haute societée*. In fact I am not prepared to make affidavit that it is even "safe" after dark. The tendency here, as in the more essentially commercial cities, seems ever westward, the finest homes and great blocks of flats are being built up the hill-sides, north and west; in the vernacular you are not "in the push" and will receive scant social attention unless your card bears the magic "N. W." following your address. Old Capitol Hill and the immediate vicinity of the White House, parts that used to be aristocratic, are now most genteel but not first-class boarding-house regions.

The city was too well planned originally, and the Government's investments in present buildings and property are too heavy to permit it to pick up stakes and follow the crowd over the hills, besides it would be undignified. It *can* maintain the center where it was intended to be and compel people to improve the property surrounding its own possessions; and that, too, without working any hardship upon the property owners, but simply by making its own holdings so attractive, centralizing interest and business by bunching its buildings and other such gentle measures that people will take to it kindly, will simply have to, and be glad to follow its mild but absolutely irresistible lead.

Congress can do it; in this as in pretty nearly all else it is a power unto itself and none may say it nay. But Congress is peculiarly constituted. As a body it generally does about as advised by its different committees. Those in charge of public buildings and of district affairs have these matters to attend to merely incidentally and along with a great mass of other and to them perhaps far more important affairs, their own districts, the general policy, etc. They are business men or lawyers. I doubt if any one on those committees, or for that matter, if any one in Congress today is either an artist or an architect, or has given any time to the study of the merely artistic side of the questions involved. I doubt further if there has ever been an artist or an architect in Congress. We are evidently unfitted for that high honor; there is some essential lacking in our composition.

Such technical knowledge and training, however, are absolutely necessary in disposing of just such questions. Unless as gifted and versatile as the immortal Jefferson was, the gentlemen of those two committees should not settle them without technical assistance. They are hounded to death by men with schemes,

BUILDINGS SOUTH OF THE MALL—THE SMITHSONIAN INSTITUTION.

and by deputations of citizens who have axes to grind and who offer arguments, prepared by technical experts, employed by themselves, to prove the desirability of scattering buildings here and there, or of planting them at this or that part of Pennsylvania

avenue, expert testimony that is, of course, absolutely unbiased. The results are evident all about us of what such committees have done in the past. The giving up of Mt. Vernon square for the Carnegie Library, one of the city's cherished breathing places, in the first place, and then accepting a design for it that does not fit the lot and that turns an uninteresting side, a narrow, raw edge, to the best and most important approach is one of the recent sins. Another sin, almost a crime, and that it is nearly too late to prevent consummating, is the decision to build a great executive department, that of Justice, costing over a million of dollars, upon

THE STATE, WAR AND NAVY BUILDING.

a fraction of block 221, opposite the Treasury; virtually a store-front, party-walled affair, snug up to the sidewalk, to which even its architect, Mr. Post, artist that he is, can not impart the dignity that should go with so important a building.

There is now a new Congress in session; it has considered, but done little as to buildings. There is a bill before both houses, creating an "Art Commission," whose duties will be to secure better results in federal, state and municipal architecture, statuary, decoration, improvement of parks, etc. It is fathered by the Public Art League of the United States, whose president is Richard W. Gilder, editor of the *Century;* it has the approval of the Institute of Architects and other such bodies. May it pass with a whoop and a cheer! It will be a godsend, and may its scope and powers be large and its composition be of the highest quality. Although we own all above and in some States all below our buildings, the law steps in and dictates how high they shall go and no higher, directs how they shall be built, what is fireproof and safe and what is a menace to life and limb and therefore forbidden, and much else that a few decades ago would have been looked upon as a tampering, an unwarranted interference with private rights. No one complains today. Why should not such a commission formulate laws that would insure some uniformity, harmony and decency in our buildings, at least those in our one-show city, and thus preserve our finer sensibilities, our artistic sense from being ruthlessly hurt if not absolutely destroyed? The law protects us as to life, health and limb while in and about those buildings; why stop there?

With such a commission Congress would have a competent body of unbiased specialists, whose advice would be worth having and acting upon. All the detail and preliminaries concerning such projects, buildings, parks, etc., would be attended to and better done by such a commission, and to the relief of the committees. It would formulate some general plan or scheme, a continuation of the one so well devised a hundred years ago, and definitely establish and in advance, just where future buildings would be placed as they are needed, their relation to each other and to existing ones. It would mean a system, well defined and not to be tampered with, where now all is chaos and disturbed by every breeze. Why, it is one of the most important items of home legislation that will be debated this session.

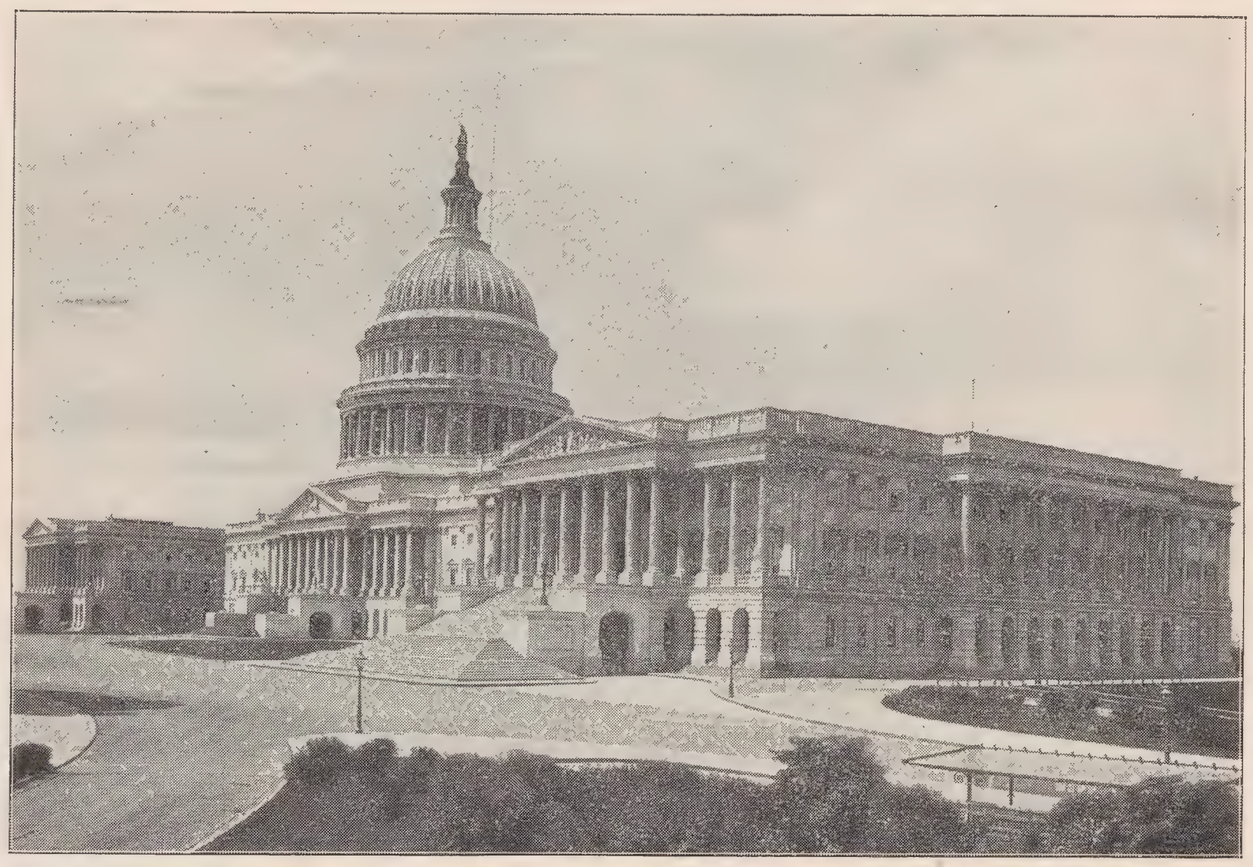
If this commission be appointed it will find its hands full at once. It might not be too late to save the Department of Justice building from being absolutely spoilt by location. It might also save the "Hall of Records" from a similar fate. Today a bill was introduced in the House authorizing the condemnation of a *fraction* of block 220, at a cost of $444,240, as a site for that building. Today, too, the Secretary of War has appointed a Commission of Engineer Officers and Architects to consider and report upon plans for the much-talked-of Memorial Bridge to Arlington, that will cost nearly $2,000,000. The papers are full of arguments and editorial comments upon the different sites proposed for the "Municipal Building"—City Hall—and I have not kept track of the number of statues appropriated for or donated to the city today, to be erected in our parks and circles, but I know there must have been *some*.

Now all these projects are urged by different interests, fathered by factions or demanded by sections. True, they pass before the Congressional committees, but there is no one to keep them together; they might as well be independent affairs and for different cities; there is absolutely no harmony or general plan, but on the contrary they are often so much at variance that it is hard to realize they are for the one Federal Government and are supposed to beautify its own home.

It would be such a commission's duty to keep all these things in touch with one another, each serving its individual purpose to the Government, but all tending to the same ultimate end, the reasonable, systematic and harmonious improvement of the Nation's Capital.

Mentioning the monuments, it seems passing strange that so peaceful, commercial a people should run so to bellicose statuary. Upon pretty nearly every patch of green you see a warrior bold, done in bronze, astride a fiery charger, and generally headed toward the White House. Is it not time to remember some of our statesmen who reached that goal and who were not warriors—the inventors and our other great men of peace? Perhaps that commission would urge that there are other and more artistic means of commemorating their memories than by making the everlasting "men on horseback" of them that we are growing weary of seeing used as mile-stones along our streets.

But bronze horsemen are cheap and, thanks be to goodness, easy to move, so let us back to our permanent investments of millions in great buildings.



EAST FRONT OF THE CAPITOL.

For twenty years there have been heated discussions in Congress, in boards of trade and in the streets about the relative advantages of placing public buildings on Pennsylvania avenue or scattering them. True, this has been by fits and starts, merely spasmodic interest, nothing definite has been done excepting the placing of the City Postoffice on that avenue, and we sincerely wish that that particular building was in Kalamazoo instead, or even farther. There have been advocates for the Government's purchase of all the intervening space between "the Avenue" and

the Mall, whereupon to erect public buildings. The very mentioning of Pennsylvania avenue is a hopeful sign, and the stout advocacy thereof of such men as Senators McMillan, Cullom, Teller and Proctor and Representatives Babcock, Lacey, Jenkins, Hull and Grout indicate there is a sort of feeling around, spasmodic only, if you wish, but in the right direction, and that we are not altogether deaf to the artistic promptings that, like original sin, are in each one of us, but that are left by so many so deucedly dormant and uncultivated in after years.

There has been one voice persistently, constantly and loudly raised in favor of the avenue; a voice not "out of the wilderness" but, until recently, from Boston. Now Franklin W. Smith is so actually living with us that his voice may even be heard in the night time. That dear old enthusiast would have us build continuous colonnades and porticos along both sides of the avenue, from the Capitol to the Treasury, classic and beautiful, with here and there temples wherein to transact our sometimes very unclassical business, departmental and otherwise. He has hammered away for years at this scheme in connection with his proposed great "Halls of the Ancients," reproduction of Egyptian, Babylonian, Grecian, Roman and medieval monuments that certainly would be of splendid educational value to the untraveled citizen. He has spent a fortune in showing us what he would do; he has built sample halls here that attract thousands of visitors and has awakened some enthusiasm. It is contagious. They also say that environment molds the man. Imagine, if this reincarnation of the avenue ever takes place, some of our grave and potent statesmen prancing down toward the Capitol clad in a toga, sandals and wreaths, rehearsing Anthony's famed oration instead of the usual plea for more postoffice buildings in their districts. And would not Harvey cry a halt upon his marvelously steamed oysters and insist upon serving us "small beasts and birds from Beneventum" and larger game "covered with green network resembling fish-scales" à la Tigellinus?

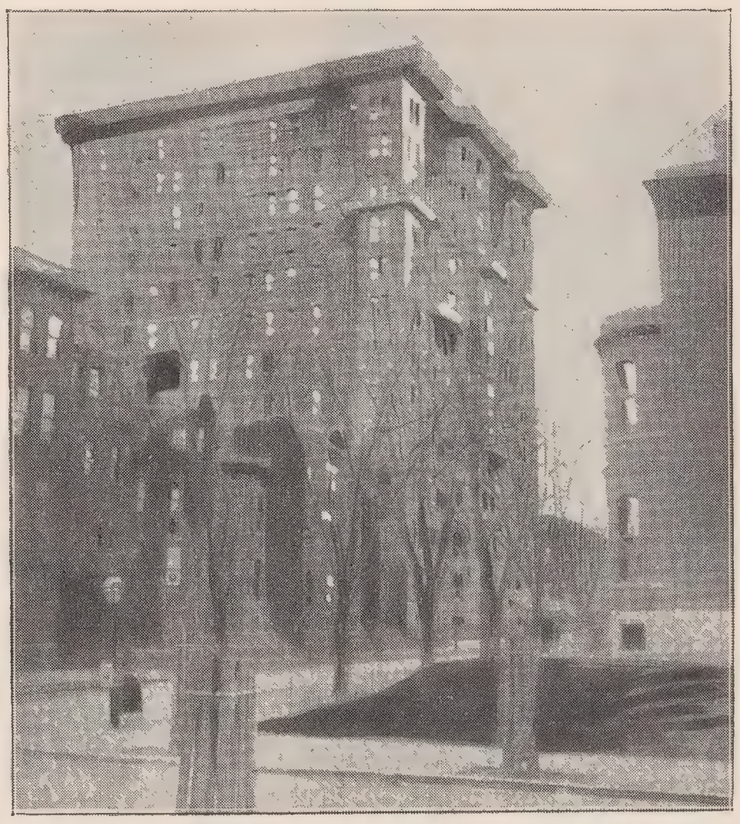
PENNSYLVANIA AVENUE FROM THE TREASURY.

GENERAL THOMAS' STATUE.

Seriously, although there has been presented a bill to Congress calling for appropriations for this scheme, I think that it, as well as any plan of condemning all the property between the avenue and the Mall, will both be laid aside — indefinitely. There will meet several Congresses yet before the people will consider so mammoth an undertaking and consequent expenditure as either project contemplates. I am afraid that Pennsylvania avenue is too far gone commercially, its property too high-priced to ever be made a unit of, an exclusively governmental, a monumental street. Vale! Let it go. There is as fine fish in the water as was ever caught, and so are there as magnificent possibilities in Washington as have ever been wasted.

Lately, Supervising Architect of the Treasury Taylor has suggested a plan that would save the Government from its contemplated sin in locating the Department of Justice upon a fraction of a block. His scheme is simply to buy the remainder of that block, 221, place that Department in the center of the south half and some other Government building, possibly the Hall of Records, on the north half. Then buy the corresponding block, 167, to the west of Lafayette Square, and place thereon two more federal buildings, the new Department of Commerce, for instance, on the south half. This would then carry the Government reservation to H street, and the full width of the Treasury, White House and State, War and Navy properties. Between the latter and these new buildings, flanking the park, he would widen the street to a grand plaza, with triumphant (more warriors, of course,) arches at its extremities. A noble plan, and a fit grouping for the executive branches at that end of the avenue to match the Legislative at the other. But that, too, I am afraid, is beyond us. Those two blocks are valued in the millions, the southeast corner of block 221, the present Riggs Bank, is probably the most valuable piece of land in the city, and there has developed powerful enough opposition to this scheme to prevent any legislation tending to such condemnation. We may shout, and I have shouted for such things, knowing they are what should be done, what is needed; but what is the use of butting one's head against a stone wall?

Should an Art Commission be appointed, it would do well to most carefully consider one suggestion, now for the first time made public; or should Congress not see fit to form such a commission, it could hardly do better than to itself consider this suggestion of one as familiar with large projects as is the architect for the $4,000,000 Postoffice building at Chicago, Henry Ives Cobb.



THE CAIRO.

To thoroughly appreciate this plan, one must remember that the central Market site between blocks 382 and 461, and the patch of grass in front of it, belong to the Government, and that the Market Company's lease of that ground expires in 1902; that the block south of 324 and 350, a sort of haymarket, or open space, also belongs to the Government, and that the Pennsylvania Railway Depot, south of block 461, is also upon Government land, and its tenure is upon "sufferance" only. Now, then, Mr.

Cobb's idea is to cut a great avenue, not *through* the Mall, but off its northern edge, and on a line from the Capitol dome at the east, straight to the end of New York avenue at the river, to the west. It is now planned to build the Memorial Bridge across the river to Arlington at that point, and on a line with New York avenue. Mr. Cobb would build that bridge at the same place, but upon the axis of this new avenue. That avenue, "Centennial," "National" or "Washington," would be an almost perfectly level stretch, and, with the bridge, nearly three miles long. Imagine the vista from the Arlington end of the bridge with the Capitol as its vanishing point! To the south of the avenue, he would redeem and turn into a beautiful river park that great area of marshy land west of the monument. (A work that the city is now doing for purposes useful as well as ornamental. Its proper elevation and banking is part of the city's scheme for prevention of floods and river encroachments that happen every ten years or so. With the present appropriations, such safety of the lower part of town can not be assured before 1926.) The rest of the Mall to the south he would leave untouched, a part of that same parking system, excepting that he would have the railways build a magnificent union depot just south of the present antique station, giving them in consideration the remainder of the block back of it for trackage, approaches, etc. Some people object to a station's being so prominent, advocating even its removal to Georgetown. Paris and other great cities are expending vast sums to get theirs to the very heart of the business districts. This one should not only be architecturally grand and in keeping with the Government buildings, but should be so conspicuous and easy of access as if it were the very pivotal point to all else. One's first impression of a city is formed upon emerging from the train that brings him into it. The impression that would be made upon one in stepping out of this station would not soon be forgotten, and something certainly worth remembering. Just to the west of that station, Mr. Cobb would leave a great open space or plaza. Then upon the space now occupied by the Market he would build the City Hall, facing upon Pennsylvania avenue and the new avenue, and with broad streets either side of it connecting the two. Flanking this building, he plans for sites for other important departmental or other federal buildings.

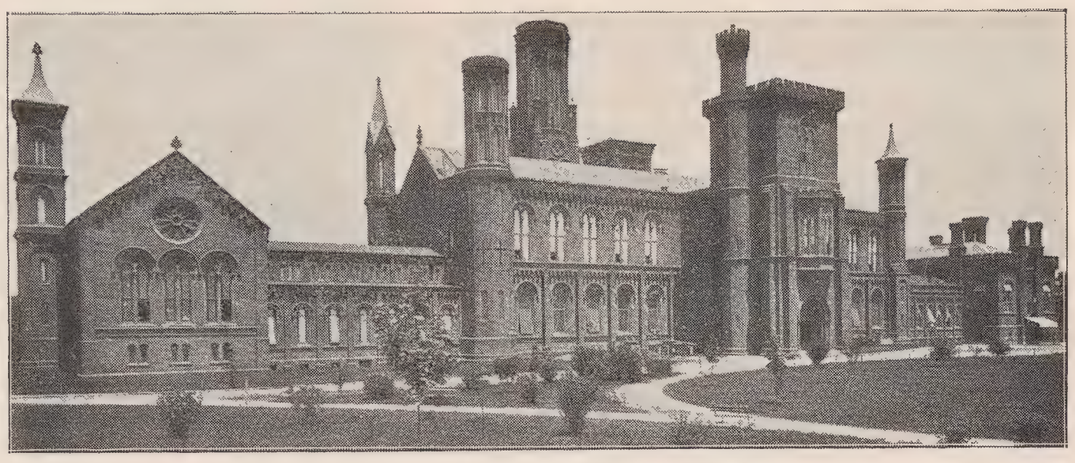
Then along the northern side of the new avenue, facing it and the present B street, he would have ample grounds upon what was the Mall for as many buildings as the Government is liable to

require for years to come. South of the White House and on its reservation, north of the new avenue, there is a splendid opportunity to build at least six more buildings, and that, too, without cutting off the view from the Executive Mansion.

And all this without condemning one inch of private property; not one penny disbursed for sites for our buildings! A grand avenue, one side park, shade and rest; upon the other nothing but great Government buildings; not a hodge-podge of shanties, flashy stone fronts, galvanized iron façades, interspersed with massive granite federal buildings, attempting to look dignified but failing on account of the company they are in; but solely and exclusively a Government avenue.

The ultra-conservatives may cry out that it would break up the Mall. It would not. It would *improve* it and actually add some land to that parking system in the very busiest part of the city, more breathing space. Some Pennsylvania avenue enthusiasts may object that it would kill their avenue and depreciate their property, but I say unto them, "Verily, this would *make* your avenue."

If the proposition were to cut the new avenue and sell lots upon it, then it might divert business from Pennsylvania avenue and other streets, but it does not contemplate that. Instead of damaging any private property it would improve all that district a hundred, aye a thousandfold. New street-car lines would be built, all that part of town, now almost unused, would be as easy of access as the Treasury is today. It would make and maintain



BUILDINGS SOUTH OF THE MALL—THE MUSEUM.

Pennsylvania avenue the great business artery, would absolutely redeem the intervening space between the two, that business artery and the Government one, and would forever fix the commercial center of the city.

In years to come, if still more sites are required, blocks 229, 230, 259, 260 and 294 could be brought into this scheme of Governmental civilization, or buildings could be extended along 173, 147, 128, etc., toward the bridge; or on a line west of those already built on the south side of the Mall. (And perhaps by that time, too, we may feel as if we could afford to make the White House the President's offices and build him a fine home, a mansion on the hill at the top of 16th street; flanking that splendid thoroughfare, from Lafayette Square to the Executive Mansion, with official homes for our Cabinet Officers and our own palatial residences!)

Anything to preserve a grouping, a system of Government structures along its own splendid park.

What more fitting commemorative work could we do, through our representatives in Congress assembled, to adequately celebrate the one-hundredth anniversary of the founding of the city than to earnestly set to work and establish some plan or scheme that would insure the continued intelligent, artistic and systematic beautifying of the Nation's Capital?

A REVIEW OF "SANITARY ENGINEERING."

BY WILLIAM S. MACHARG, C.E.

WE opened this bulky volume* with pleasant anticipations of following, with connected steps, the progress of sanitary improvement through the interesting period that has elapsed since the publication of the last edition which we have seen of Baldwin Latham's work on the same subject. The latter was published in 1878, and the intervening twenty years has witnessed the inception and development of bacteriological treatment of sewage, a treatment wherein undoubtedly lies the ultimate solution of the problem of final disposal of town sewage without detriment to public health.

A narrative of the construction of the many systems of sewage purification which mark this period, with a description of the methods of treatment employed and a comparison of their respective efficiencies, written by one who has lived in the midst of the activity of this work which has, perforce, existed in England, would be both interesting and instructive.

Mr. W. Santo Crimp, C. E., published such a book ten years ago based on his own experiences and observation, ending just before the later methods were brought into active use, and it is to be wished that he may see fit to bring the narrative down to the present time.

The author of the book under consideration has collected the material for such a work, consisting of reports by engineers and others on constructed works, descriptions of processes by inventors or proprietors, excerpts from patents, etc., and has put them forth without comparison or conclusion, so that the work is a notebook rather than a treatise on sanitary engineering. The layman or learner can hardly determine relative values of the methods described, or place these methods in that sequence

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*"Sanitary Engineering." By Col. E. S. C. Moore, R.E., etc. Longmans, Green & Co., New York, and B. T. Batsford, London.

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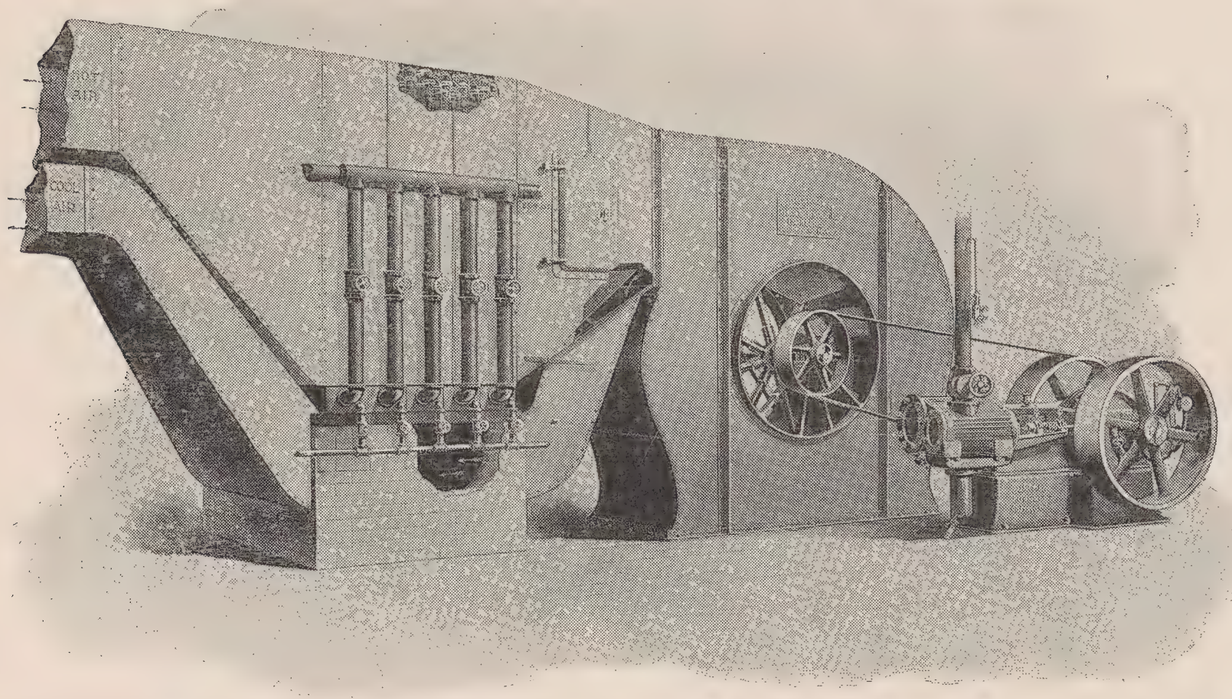

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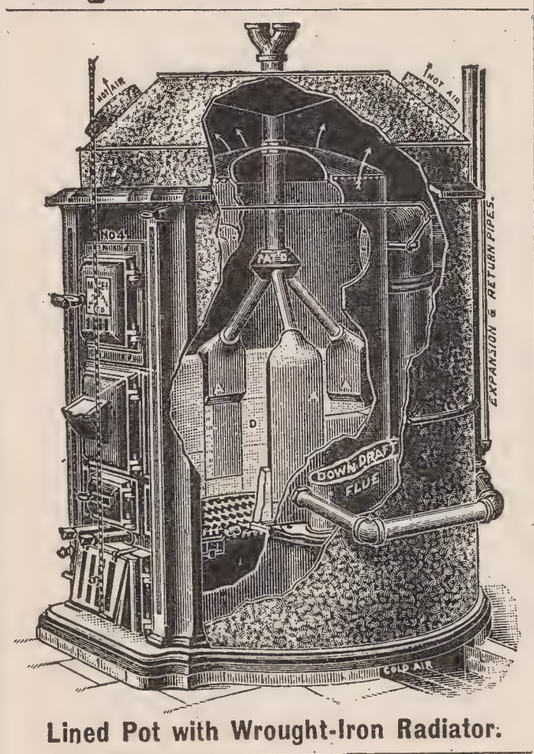

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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XXXV. ADVERTISERS' TRADE SUPPLEMENT. No. 2

Valuable Publications Free.

Any architect can secure valuable books of reference without cost by sending for the catalogues of materials, etc., noticed from month to month in these columns. Large sums are spent on these catalogues, and they contain much practical information. Many are art productions. They may be obtained free on application to those issuing them. In writing please mention THE INLAND ARCHITECT, and oblige the journal and the dealer.

REQUESTS FOR CATALOGUES AND SAMPLES.

Those wishing catalogues and samples sent them by dealers in general may have their names inserted under this heading free of charge. The only recompense desired is that the dealers who send catalogues to these addresses give THE INLAND ARCHITECT due credit for business benefits that result.

ARTHUR J. WILLIAMS, Architect, Oklahoma City, Oklahoma.

BUILDERS' EXCHANGE, 204 St. James St., Montreal, Canada. Ask for catalogues, etc.

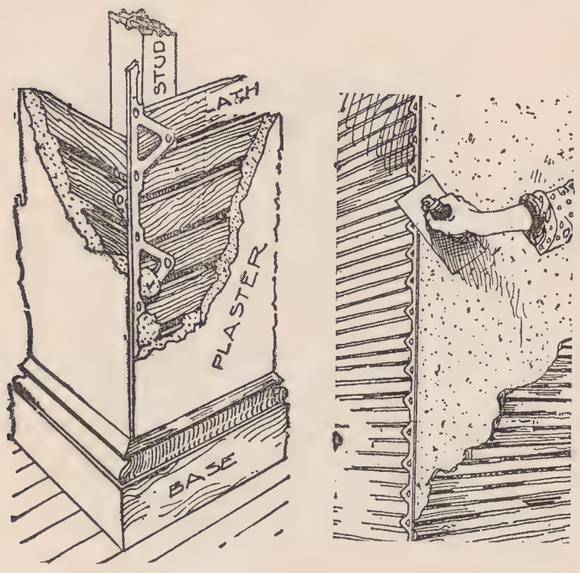
MR. JOHN STAFFORD WHITE, who has been in charge of the draughting room of the St. Louis office of Messrs. Shepley, Rutan & Coolidge, for the past three years, announces that he has opened an office in the Chemical building for the practice of architecture, the rendering of architectural drawings in water color and pen and ink, and the making of special designs for furniture, gas fixtures, etc. He will be pleased to receive samples, etc., from the trade.

ARCHITECT, Box 307, Vicksburg, Mississippi, will be glad to receive catalogues of all classes of building materials.

The general offices of the J. RIELY GORDON COMPANY, Architects, have been moved from San Antonio, Texas, to their new building, corner Main and Field streets, Dallas, Texas, where they will be pleased to receive catalogues and samples.

PLASTER CORNER PROTECTION.

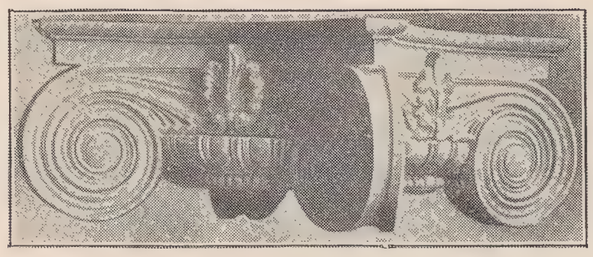
Metal corner beads have recently sprung up as an improvement over the old wooden bead, and prominent among these is the Woods' Steel Corner. It is unique in design, and possesses many meritorious points, chief of which is its low price. Heretofore, cost has been the only drawback to the general use of metal corners, but Woods' Steel Corner has offset this. It has been



used within the last twelve months very extensively in all classes of structures. In public buildings, churches, schools, hotels, etc., where the wear is severe, its use is almost imperative. The accompanying engravings illustrate its practical application. It not only is serviceable after the corner is made, but assists in the making. It makes the grounds, and enables the plasterer to work more rapidly than in making the corner the old way with a straight edge. Gara, McGinley & Co., 23 South Seventeenth street, Philadelphia, the manufacturers, issue descriptive printed matter, and will send sample if requested.

CAPITALS AND BRACKETS.

Have you ever examined the material and fine detail of the beautiful ornamentation so much used now in the exterior of inexpensive Colonial residences? All admirers of classical buildings have certainly noticed the very marked improvement that has taken place in late years in the ornamental features of those structures. The crude wood-carved capitals and brackets, the sawed-out rough ornaments, have all been discarded, and are now supplanted by softly



modeled, correctly designed examples of the best known styles of the classical and renaissance periods. The high standard of design and execution, coupled with a very low cost, make it possible to use those articles on any simple wood or brick constructed building where a refined exterior is desired. The material used in the manufacture of these goods, a composition which is very hard and durable, warranted to stand in any climate, allows a fine detailed execution. A great number of architects have availed themselves of the unlimited opportunities afforded by this class of goods for the beautifying of exteriors.

The new catalogue of capitals and brackets issued by the Decorators Supply Company, 215 South Clinton street, Chicago, shows some fine specimens of these manufactured articles, and gives some valuable explanation for the use of and application of them.

BENT GLASS IN BUILDINGS.

Bent glass adds much to any building or store front. A single pane gives extra tone to the whole structure.

To those contemplating building or making alterations, it is important to know that common double thick glass can be bent to any part of a circle not exceeding half circle. Polished plate can also be bent in the same manner. The difference in appearance between the two lights after bending is hardly perceptible; in fact, when set in a building, it would require an expert to detect any difference at all. However, there is quite a difference in the cost. Bent double thick glass is only about one-fifth of the cost of bent plate glass, which is a great saving in the construction of a building.

The curving or bending of double thick glass takes away the waviness, gives a polish to the glass, and adds to its strength and resistance to high winds and severe storms.

The chief objection made by contractors in figuring on large buildings, such as hotels, office buildings, etc., where a large quantity of bent glass is required, is the difficulty they experience in procuring glass after it has been bent that will fit the frames satisfactorily, and has a surface which does not show up burned.

The firm which was awarded the contract for the glass to be put in the Hotel Astoria when it was erected, and which included a considerable quantity of bent glass, placed the order for the same with the Oriel Glass Company of St. Louis, and without one exception every plate of bent glass fitted into its respective frame with no difficulty whatever, and its surface uniform and free from burned spots.

The Oriel Glass Company of St. Louis are well and favorably known throughout the United States by the excellent quality and finish which characterizes every plate of bent glass that is made at their works, and by the prompt and satisfactory manner in which they fill all orders committed to their care. This company manufactures all kinds of bent glass for buildings, showcases and fancy furniture, etc., the product being shipped in large quantities, not only to all points in the Union, but also to Canada and Mexico.

FIREPROOF TESTS.

The Roebling Construction Company, 121 Liberty street, New York, have put in circulation a pamphlet containing the results of a series of fire and water tests of fireproof floors, conducted by the New York building department assisted by the city fire department. The conditions under which the tests were made make the results of scientific value. The Roebling Company have embodied the official report in full so far as it bears upon their system of fireproofing, and also present photographs, drawings, etc., made by the department. Space forbids anything like a full synopsis of the contents of the pamphlet referred to; but it certainly makes a flattering showing for the Roebling Construction Company, and contains much information of value to those interested in this most essential feature of modern architecture. The company will gladly furnish a copy of the valuable work upon application.

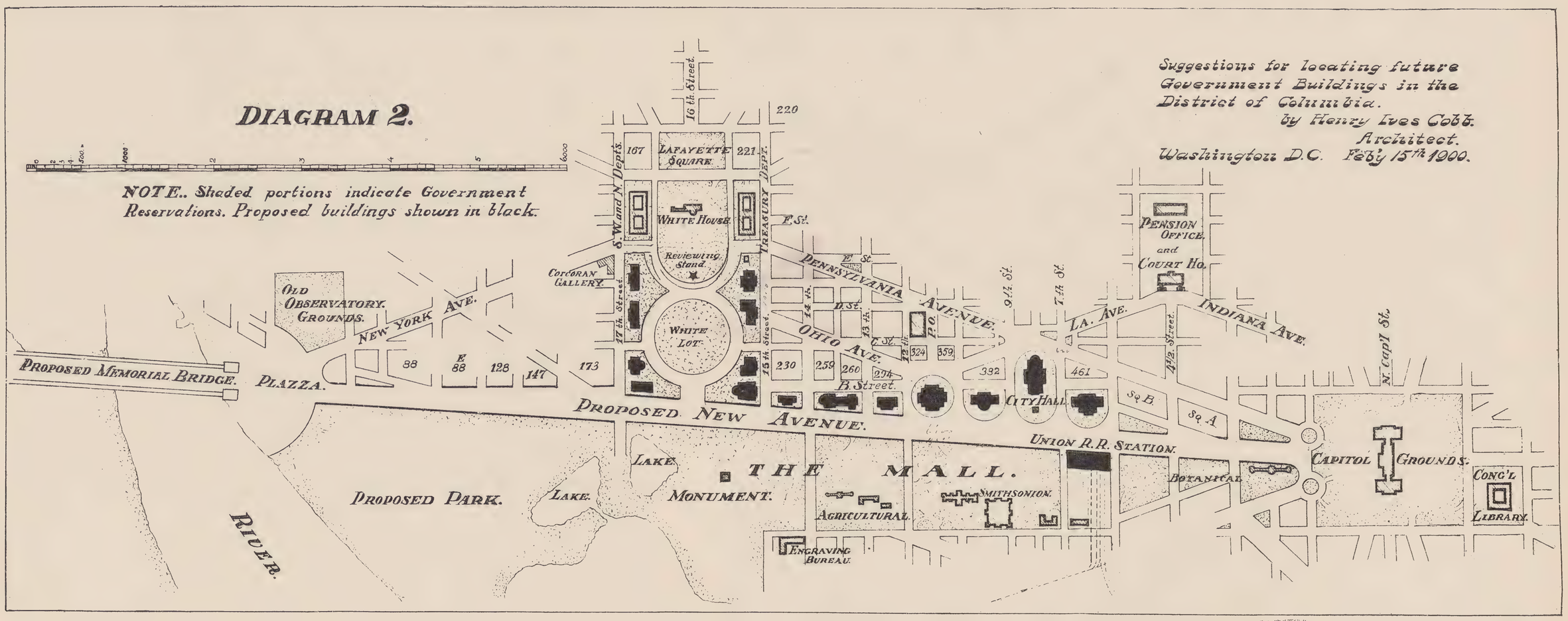
TRADE NOTES.

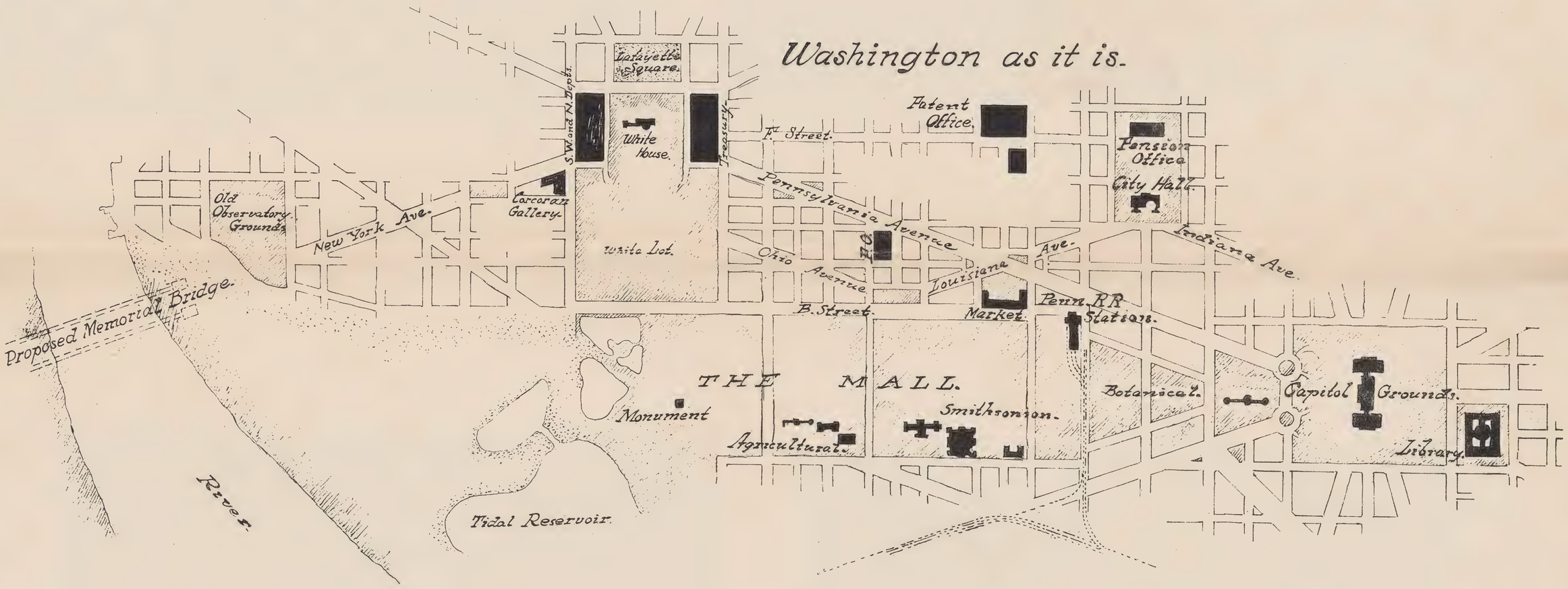
THE demand for water filters capable of supplying the entire household requirements seems to be rapidly increasing. We are advised that William B. Scaife & Sons, Pittsburg, Pennsylvania, have recently received a large number of orders from almost every section of the country for their Scaife Filters, varying in capacity from 100 to 800 gallons per hour. No chemicals or coagulant of any description are used in these filters.

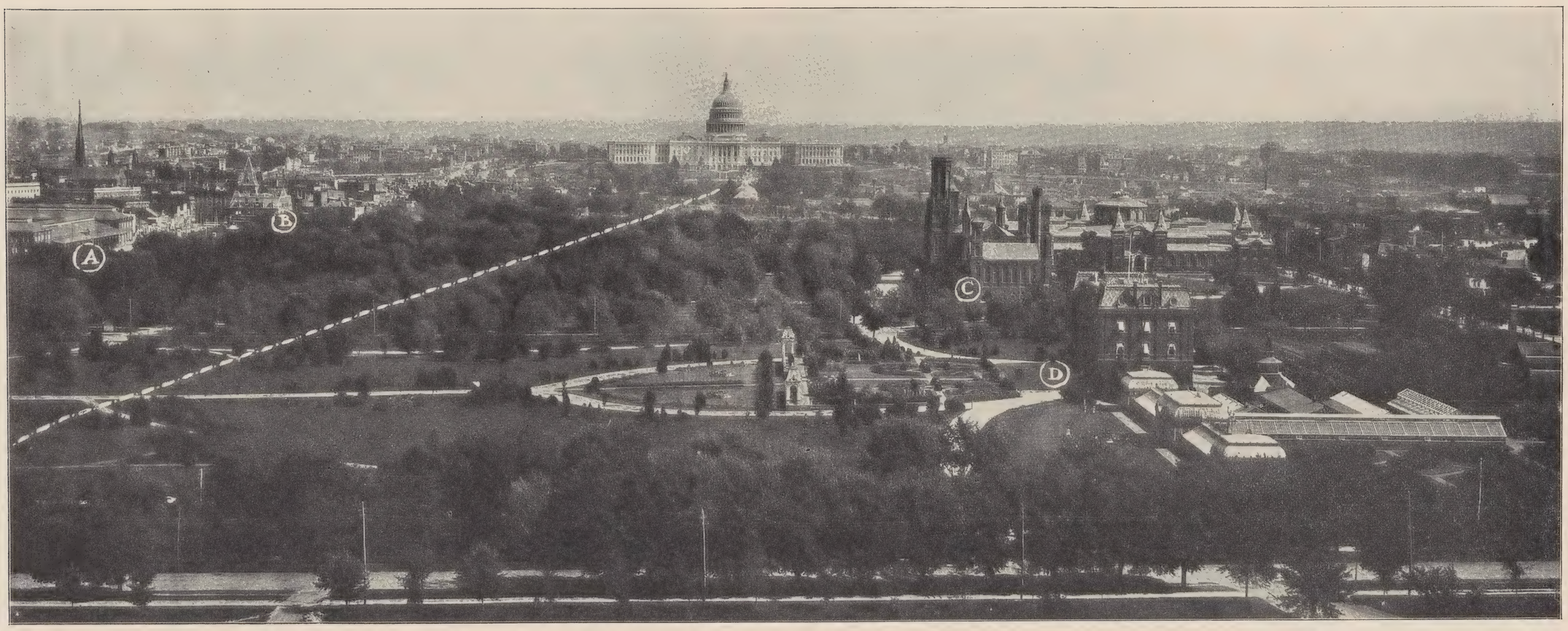
SAMUEL CABOT, of 70 Kilby street, Boston, Massachusetts, manufacturer of an insulating and deafening "Quilt," calls attention in a booklet to several schoolhouses in different parts of the country where this material has been used with marked success. As before noted in these columns, the material is made of eel-grass quilted between layers of manila paper or asbestos, as the requirements may demand. The character of the buildings shown in the booklet mentioned indicate that nothing of an inferior or questionable character was employed.

A NEW booklet, just published on Enameled Brick by the Tiffany Enameled Brick Company of Chicago, has a bright, attractive cover and contains a showing of the rapid broadening of ideas as to the use of enameled brick, not only in the service portion of the house, bathrooms, etc., but their value for the fronts or façades of both public and private buildings. It also contains diagrams of the principal shapes used, approximate price per square foot, and general information that will prove not only interesting but instructive to the architect and layman. The booklet will be forwarded to any address on application to the Tiffany Enameled Brick Company, Marquette building, Chicago, Ill.

THE Buffalo Down-Draft Forges and Furnaces are a new departure in smoke removing. Smoke and gases are drawn away immediately on being generated. No escape from the largest and heaviest fires. Done by down-draft suction through underground tile pipes. No overhead piping systems and inefficient telescopic hoods obstructing light and valuable space. Hoods adjustable to different positions at fire, according to conditions. Forge-shop atmosphere pure as the best ventilated machine rooms, and temperature materially reduced in summer. Practically indestructible. First cost moderate. No further expense—overhead galvanized iron piping is subject to frequent renewal. Buffalo Down-Draft Forge shop equipments taken from burning buildings have been erected without repairs. Buffalo Down-Draft Forges were patented November 29, 1894. Users and infringing manufacturers will note all rights vigorously upheld. Send for illustrated brochure.







A The Old Market House.
B Pennsylvania Railway Station.
C Smithsonian Institution.
D Department of Agriculture.
Dotted line shows proposed avenue.

VIEW OF WASHINGTON, D. C., FROM THE MONUMENT, AND DIAGRAMS,

IN ILLUSTRATION OF ARTICLE ON "BEAUTIFYING THE NATION'S CAPITAL."

THE CLUBHOUSE.

VIEW IN LIVING-ROOM.

VIEW IN DINING-ROOM.

VIEW IN READING-ROOM.

THE "JANE CLUB," CHICAGO.

POND & POND, ARCHITECTS.

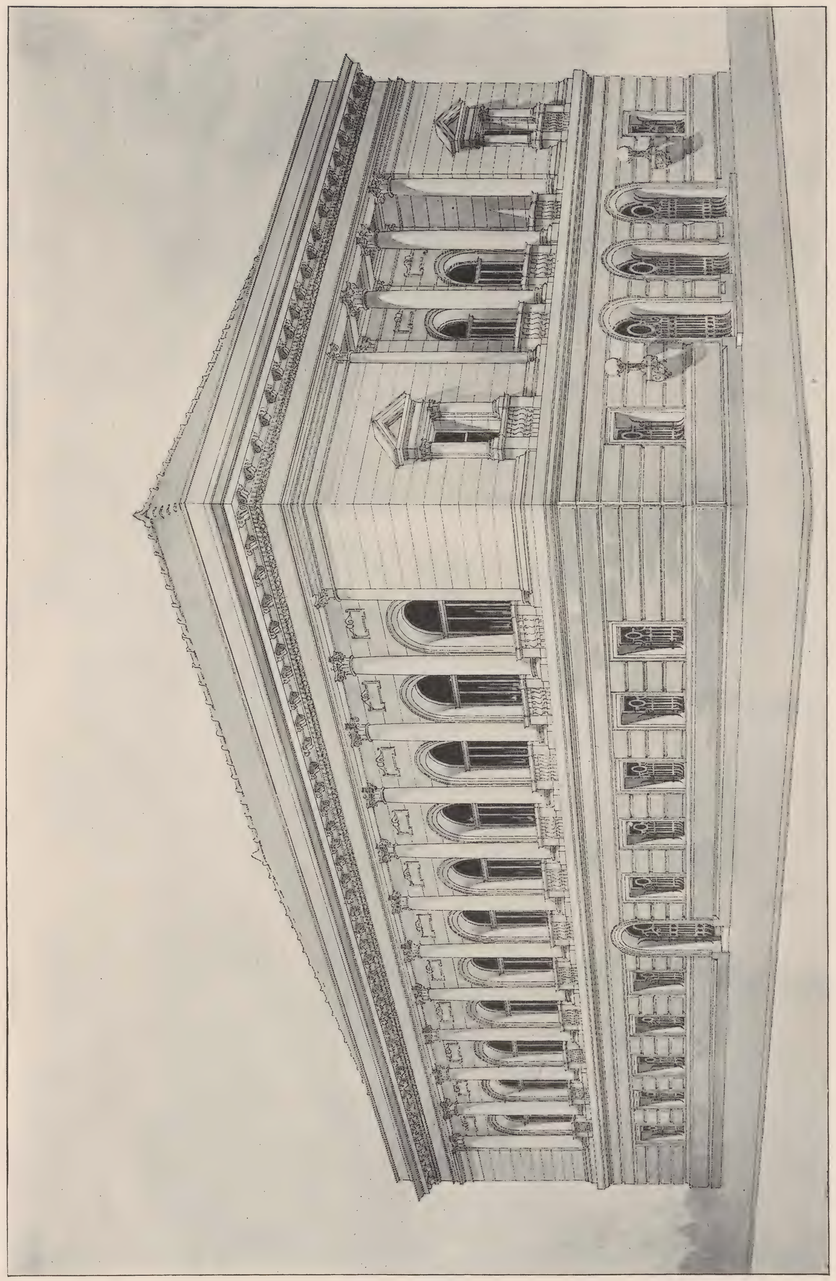
THE GEORGE M. PULLMAN MEMORIAL AT GRACELAND CEMETERY, CHICAGO.

SOLON S. BEMAN, ARCHITECT.

THE CLAUS SPRECKELS BUILDING, SAN FRANCISCO, CALIFORNIA.

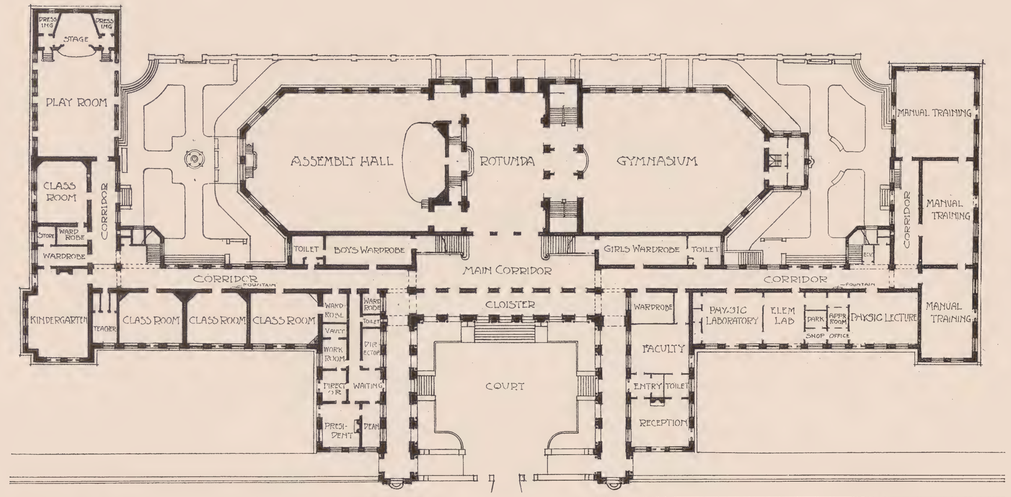
REID BROTHERS, ARCHITECTS.

Selected for the American Architectural Exhibit at Paris Exposition.

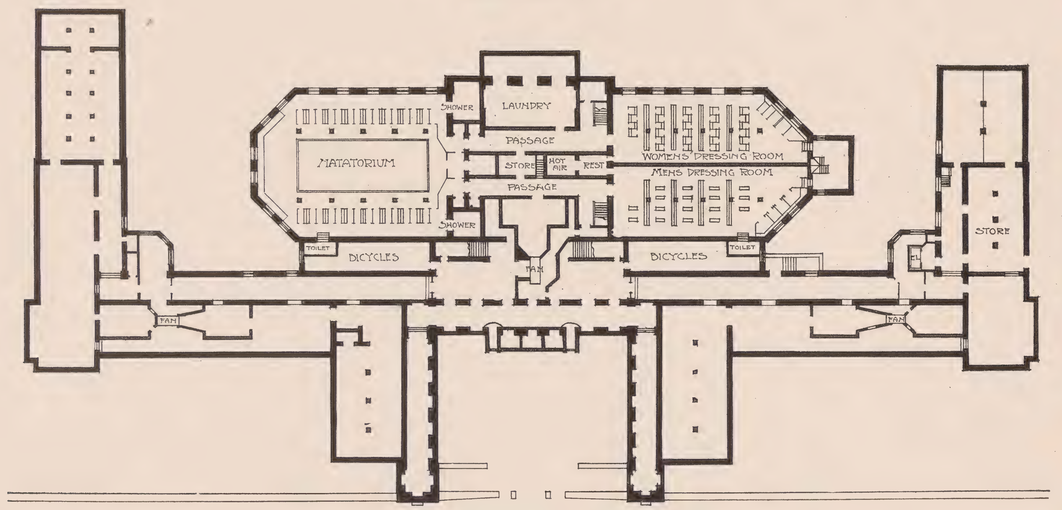


COMPETITION DESIGN FOR ST. LOUIS TRUST COMPANY BUILDING, ST. LOUIS.

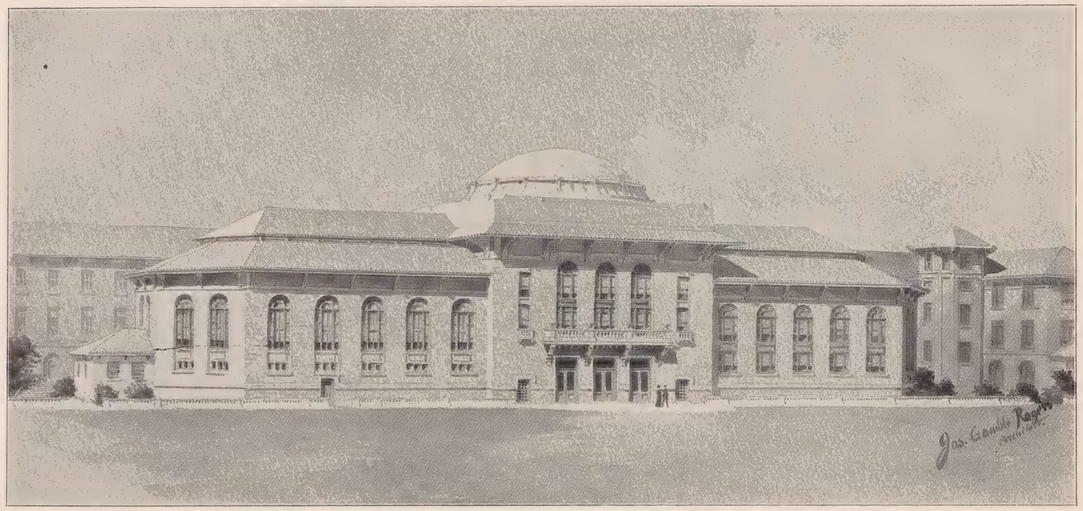
SUBMITTED BY THEO. C. LINK, ARCHITECT.



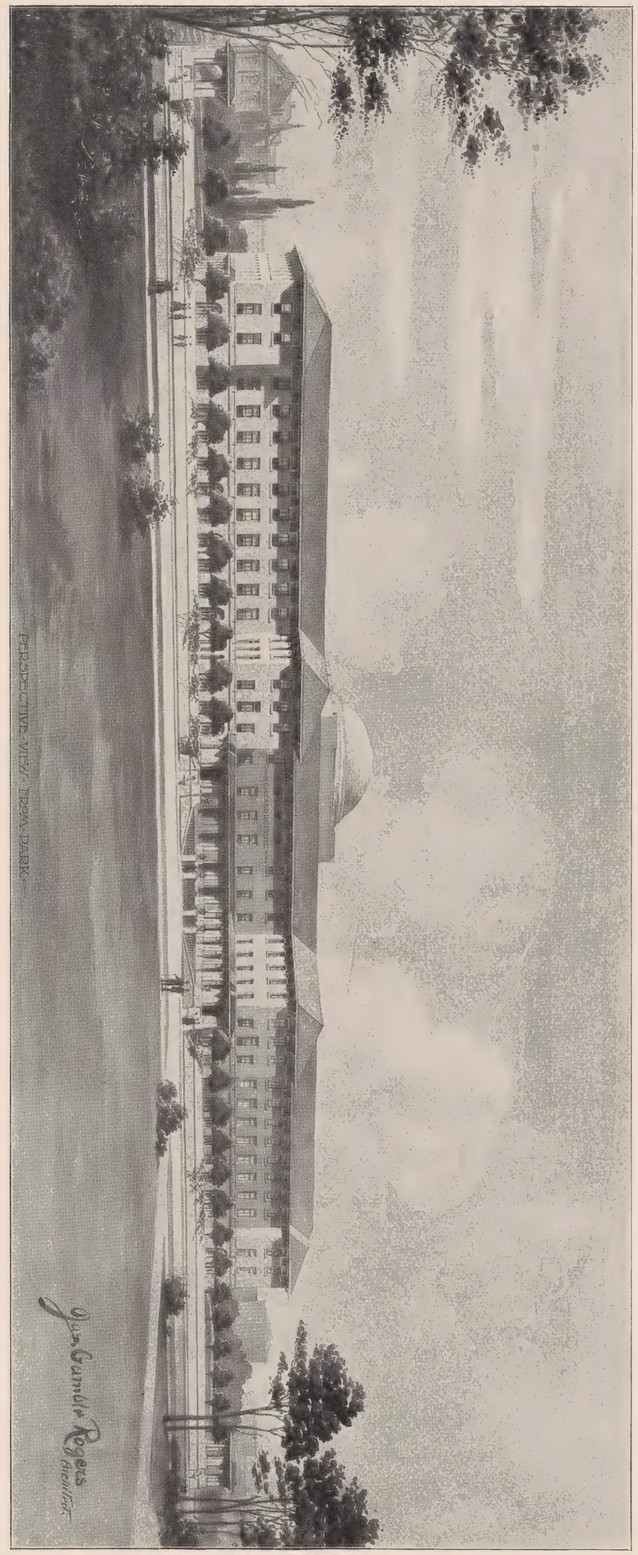
FIRST STORY PLAN.



BASEMENT PLAN.



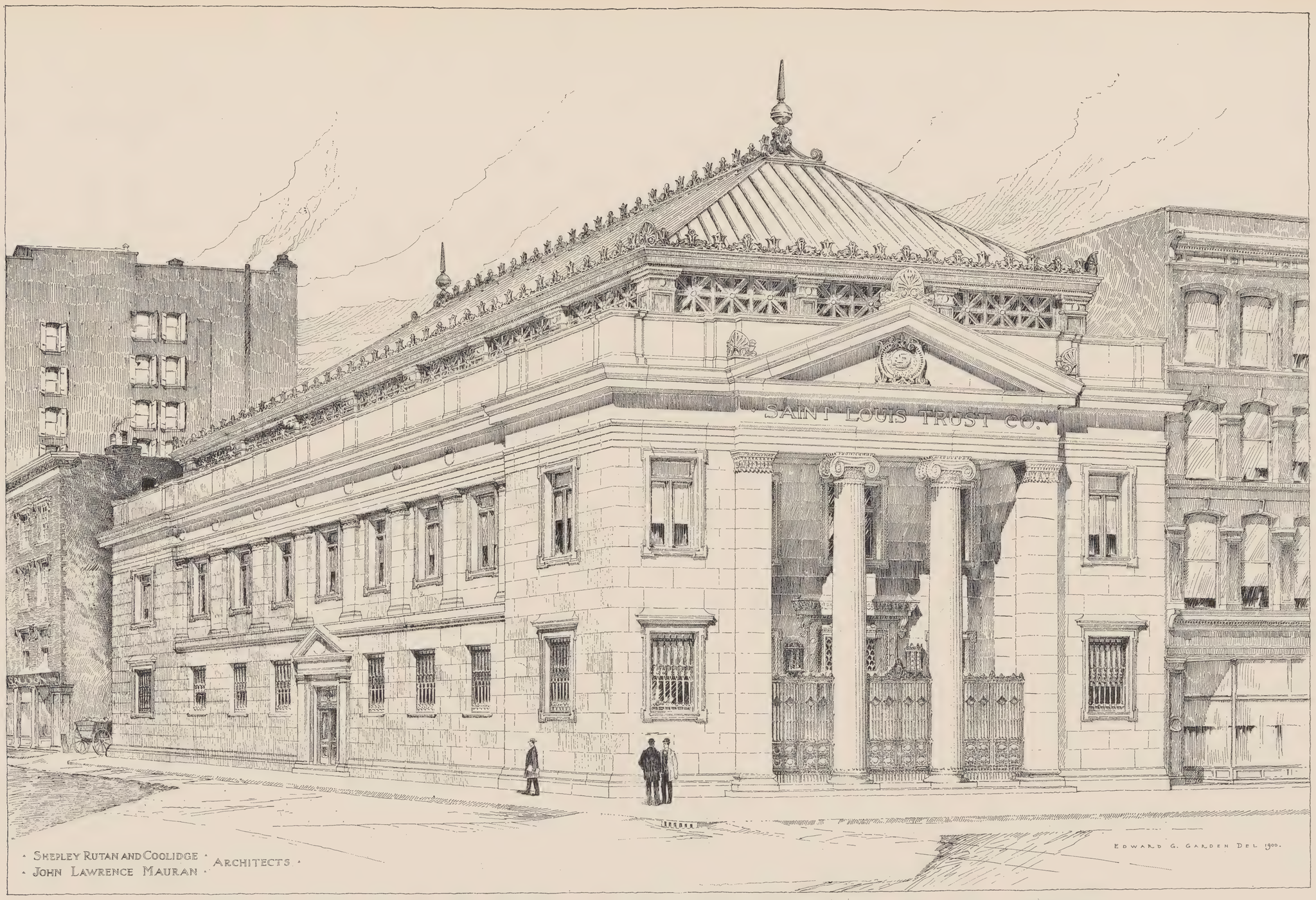
VIEW FROM PLAYGROUND.
THE CHICAGO INSTITUTE, CHICAGO.
JAMES GAMBLE ROGERS, ARCHITECT.



THE CHICAGO INSTITUTE, CHICAGO.
JAMES GAMBLE ROGERS, ARCHITECT.

COMPETITIVE DESIGN FOR SAINT LOUIS TRUST COMPANY BUILDING, ST. LOUIS, MISSOURI.

SUBMITTED BY EAMES & YOUNG, ARCHITECTS.



ACCEPTED DESIGN FOR SAINT LOUIS TRUST COMPANY BUILDING, ST. LOUIS, MISSOURI.

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Selected for American Architectural Exhibit
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VIEW IN CHAPEL OF ST. PAUL'S SCHOOL, CONCORD, N. H.

HENRY VAUGHAN, ARCHITECT, BOSTON.

Selected for American Architectural Exhibit at Paris Exposition.

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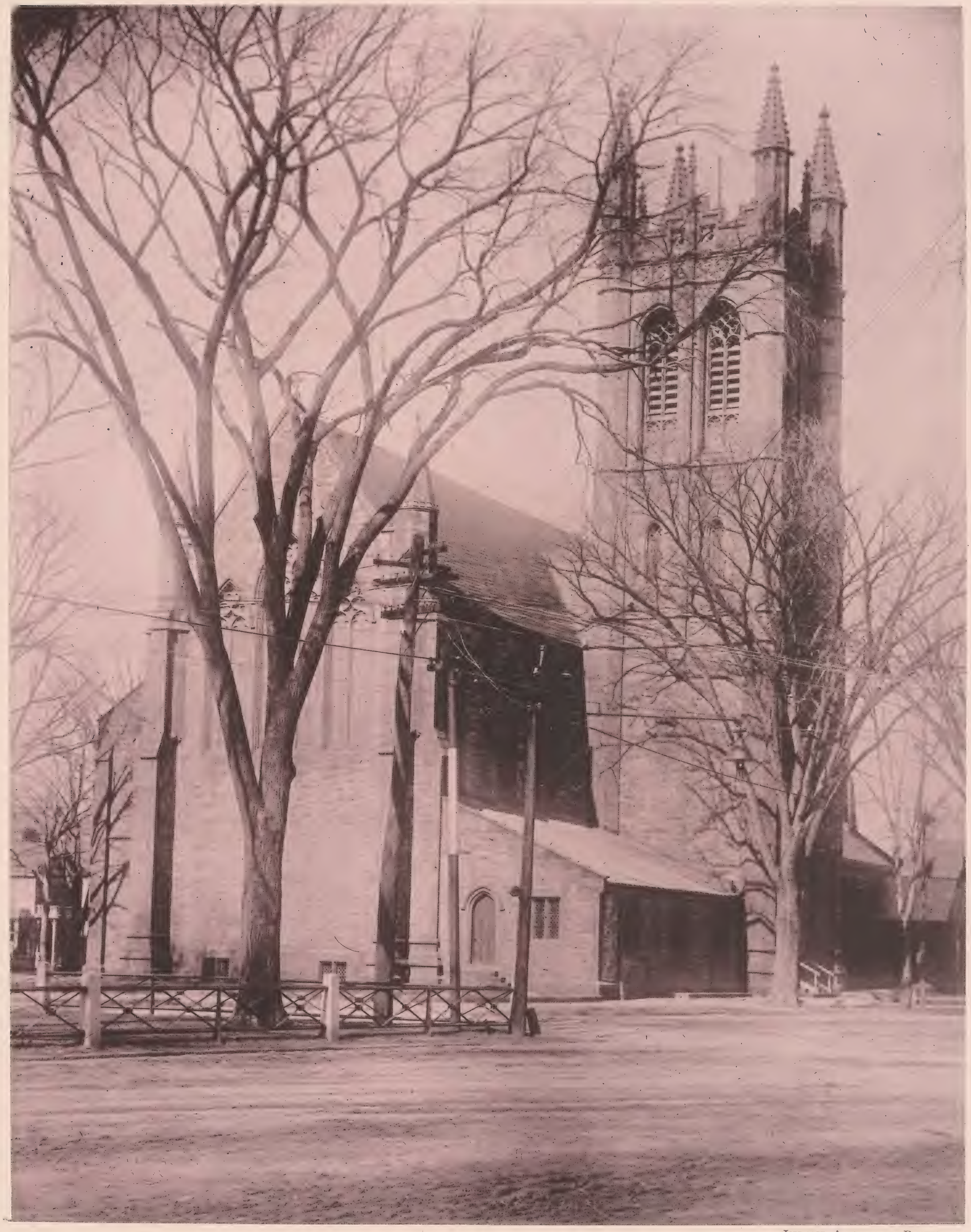
MYRON HUNT, ARCHITECT, CHICAGO.



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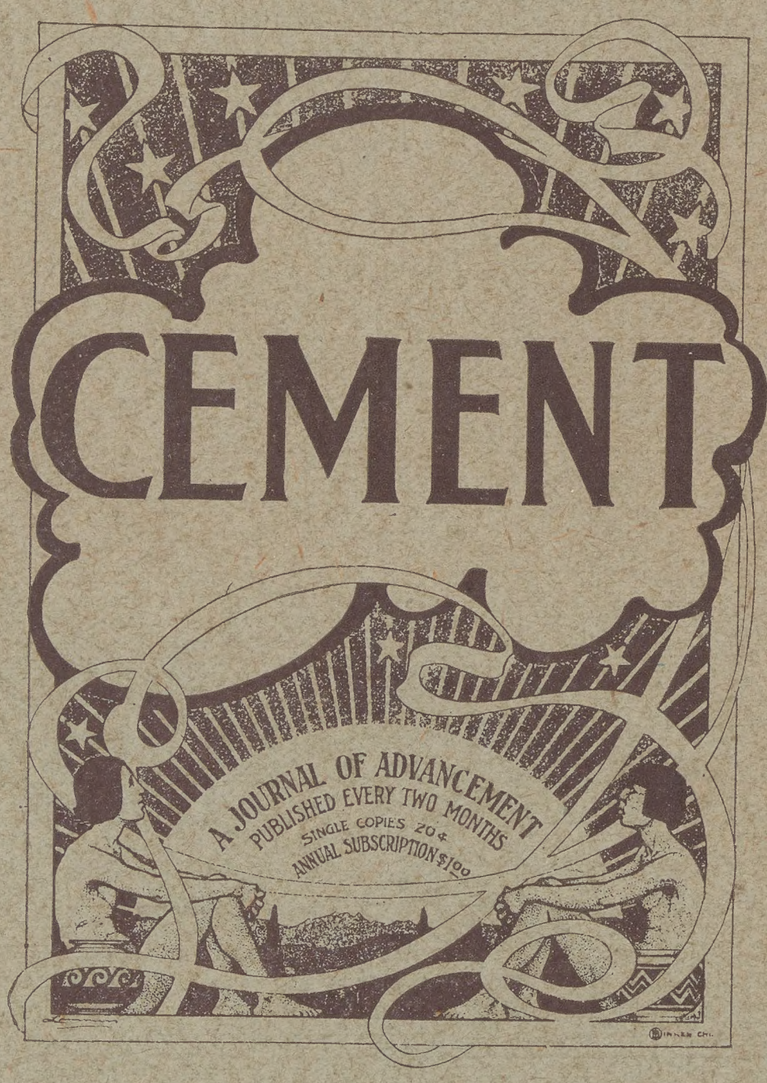

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